

06 - STRUCTURAL  
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THE DESIGN APPEARS TO CONFORM TO APPLICABLE CRITERIA. APPROVAL IS NOT TO BE CONSTRUED TO MEAN THAT ALL ASPECTS OF THE DESIGN HAVE BEEN PERSONALLY CHECKED BY THE UNDERSIGNED.

TRANSPORTATION PRINCIPAL ENGINEER

CODES AND REFERENCES

1. ALL WORK SHALL CONFORM TO THE STATE OF CONNECTICUT BUILDING CODE WITH 2005 CONNECTICUT SUPPLEMENT AND 2009 AMENDMENTS AND ALL CONTRACT DOCUMENTS.

DESIGN LOADS

1. ROOF SNOW LOAD

a. GROUND SNOW LOAD, Pg = 40 PSF.

b. FLAT-ROOF SNOW LOAD, Pf = 34 PSF.

c. EXPOSURE FACTOR, Ce = 1.0

d. SNOW IMPORTANCE FACTOR, Is = 1.2

2. WIND LOAD

a. BASIC WIND SPEED, 110 MPH.

b. WIND IMPORTANCE FACTOR, Iw = 1.15

c. EXPOSURE C

3. SEISMIC LOAD

a. PEAK VELOCITY-RELATED ACCELERATION, Av = 0.11

b. PEAK ACCELERATION, Aa = 0.15

c. SEISMIC IMPORTANCE FACTOR, Ie = 1.5

d. SEISMIC USE GROUP III

e. SITE CLASSIFICATION - C

f. LATERAL LOAD-RESISTING SYSTEMS:

STEEL BRACED FRAME

REINFORCED CMU SHEAR WALLS

g. RESPONSE MODIFICATION FACTOR, R = 3

DEFLECTION AMPLIFICATION FACTOR, Cd = 2½

h. ANALYSIS PROCEDURE UTILIZED - EQUIVALENT LATERAL FORCE PROCEDURE

i. SEISMIC DESIGN CATEGORY C.

j. SEISMIC LOAD FACTORS, Ss = 0.222, S1 = 0.06

SDs = 0.1776, SD1 = 0.068

CONCRETE

1. FOUNDATIONS SHALL BE PLACED ON 12 INCHES MINIMUM OF COMPACTED GRANULAR FILL IN ACCORDANCE WITH FORM 816, SECTION 2.13, AND BE EXTENDED 12 INCHES BEYOND THE LIMITS OF FOOTING ON ALL SIDES AND MAY BEAR ON PREPARED IN-SITU SOIL. THE AREA OUTSIDE OF THE LIMITS OF GRANULAR FILL IS TO HAVE THE FOUNDATION PREPARATION IN ACCORDANCE WITH FORM 816, SECTION 2.03.03-2.

2. SLAB-ON-GRADE SHALL BE PLACED ON 6 INCHES THICK OF GRANULAR FILL IN ACCORDANCE WITH FORM 816, SECTION 2.13.

3. PROVIDE RIGID INSULATION AT EXTERIOR WALLS (TYP.) AND VAPOR BARRIER UNDER SLAB-ON-GRADE (TYP.), AS SHOWN ON THE STRUCTURAL PLANS.

4. THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF FOUNDATION EXPANSION JOINTS AND MASONRY CONTROL JOINTS. CONTROL JOINTS FOR MASONRY SHALL BE PLACED AT LOCATIONS WHERE EXPANSION JOINTS OCCUR IN THE FOUNDATION.

5. CONTROL JOINTS IN THE FOUNDATION WALLS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 50 FT.

6. REINFORCED CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

7. ALL CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT AND SHALL BE CLASS 'F' IN ACCORDANCE WITH FORM 816, SECTION M.03, AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.

8. REINFORCING BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.

9. COORDINATE PLANS WITH THE CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MISCELLANEOUS CONCRETE WORK.

10. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185.

11. REINFORCEMENT DETAILS SHALL CONFORM TO ACI 318. ALL CONCRETE REINFORCEMENT SPLICES SHALL BE ACI 318 CLASS 'B' SPLICES, UNLESS OTHERWISE NOTED.

12. ADDITIONAL REINFORCEMENT AT PENETRATIONS THROUGH REINFORCED CONCRETE WALLS AND SLABS SHALL BE PROVIDED AS SHOWN ON THE STRUCTURAL PLANS.

13. EXPOSED CORNERS OF CONCRETE SHALL HAVE A ¾" X ¾" CHAMFER, UNLESS OTHERWISE NOTED.

14. NON-SHRINK GROUT UNDER BASE PLATES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI.

15. REINFORCING CLEAR COVER, UNLESS OTHERWISE NOTED: FOOTINGS - 3" FOUNDATION WALLS AND PIERS - 2" SLAB ON GRADE - 2"

16. CONCRETE MIX DESIGN WITH ADMIXTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

2. STRUCTURAL W-SHAPES, CHANNELS, ANGLES AND PLATES SHALL CONFORM TO ASTM A992 50 KSI, STEEL, UNLESS OTHERWISE NOTED. STRUCTURAL TUBE SHALL CONFORM TO ASTM A618, 50 KSI, GRADE 1.

3. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.1, USING E7018 ELECTRODES.

4. WHERE WELD SIZES ARE NOT SPECIFIED, A MINIMUM WELD SIZE SHALL BE USED IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.1

5. WELDS SHALL BE VISUALLY INSPECTED, UNLESS OTHERWISE NOTED.

6. SHOP AND FIELD WELDS SHALL BE INSPECTED BY AN AWS-CERTIFIED WELDING INSPECTOR HIRED BY THE CONTRACTOR.

7. BOLTS SHALL BE ¾" DIAMETER ASTM A325-X WITH 13/16" DIAMETER HOLES, UNLESS OTHERWISE NOTED. ALL BOLT CONNECTIONS SHALL BE SLIP-CRITICAL UNLESS OTHERWISE NOTED.

8. ALL A325 BOLTS SHALL BE PRETENSIONED, UNLESS OTHERWISE NOTED. TENSION-CONTROL (TC) BOLTS ARE ALSO ACCEPTABLE.

9. BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS.

10. ALL STRUCTURAL STEEL SHALL BE PRIMED AND PAINTED IN CONFORMANCE WITH THE CONTRACT SPECIFICATIONS. ALL SURFACES SHALL BE BLAST-CLEANED PER PROVISIONS OF SSPC-SP 10, "NEAR-WHITE BLAST CLEANING".

11. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, UNLESS OTHERWISE NOTED.

12. COLUMN BASE PLATES SHALL BE LEVELED USING DOUBLE NUTS AND GROUT.

13. THE CONTRACTOR SHALL COMPLY WITH OSHA SAFETY STANDARD FOR STEEL ERECTION, EFFECTIVE JANUARY 18, 2002.

MASONRY

1. MASONRY DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".

2. CONCRETE BLOCK UNITS SHALL BE TYPE I, LIGHTWEIGHT, LOAD BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C90 FOR HOLLOW BLOCKS AND ASTM C145 FOR SOLID BLOCKS.

3. CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH (fm) OF 1,900 PSI.

4. ALL REINFORCED CELLS SHALL BE CONTINUOUSLY GROUTED. GROUT IS TO CONFORM TO ASTM C476 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

5. MORTAR FOR CONCRETE BLOCK SHALL BE TYPE S, CONFORMING TO ASTM C270, AS SPECIFIED, ULESS NOTED OTHERWISE. THE FIRST COURSE OF BLOCK SHALL BE PLACED USING A FULL MORTAR BED. FOR EXTERIOR BRICK VENEER MORTAR SHALL BE TYPE N, CONFORMING TO ASTM C270.

6. MASONRY WALLS WITH A HEIGHT GREATER THAN 12 FT. SHALL BE Laterally SUPPORTED AT THE TOP AS SPECIFIED ON THE STRUCTURAL DRAWINGS USING ANGLES ATTACHED TO STRUCTURAL STEEL OR ROOF DECKING, UNLESS OTHERWISE NOTED. THE ATTACHMENT SHALL ALLOW VERTICAL MOVEMENT (DEFLECTION) OF THE DECK AND JOIST, UNLESS OTHERWISE NOTED. ALL MASONRY WALLS SHALL BE APPROPRIATELY SHORED DURING CONSTRUCTION TO RESIST ALL DESIGN WIND LOADING.

7. BOND BEAMS WITH TWO (2) #5 BARS SHALL BE PROVIDED AT THE TOP OF ALL MASONRY WALLS, UNLESS OTHERWISE NOTED.

8. LINTELS SHALL BE PROVIDED AT ALL MASONRY OPENINGS AS SHOWN ON THE STRUCTURAL PLANS OR AS REQUIRED DUE TO ELECTRICAL OR MECHANICAL PENETRATIONS, UNLESS OTHERWISE NOTED.

9. PROVIDE ONE (1) #5 REBAR EACH SIDE OF ALL OPENINGS WITHIN MASONRY, OR CELLS ADJACENT TO STRUCTURAL STEEL OR CONTROL JOINTS. REBAR SHALL EXTEND 2 FEET BEYOND OPENING, OR BE HOOKED IF APPROVED BY THE DESIGNER.

10. ALL VISIBLE JOINTS SHALL BE SEALED. PROVIDE BACKER ROD.

11. PROVIDE CONTROL JOINTS IN MASONRY AS SHOWN ON THE PLANS AND AS CALLED FOR WITHIN THE CONTRACT SPECIFICATIONS.

12. WHERE MASONRY IS ADJACENT TO STRUCTURAL STEEL, FLEXIBLE ANCHORS, COMPRESSIBLE JOINT FILLER MATERIAL AND JOINT SEALANT SHALL BE USED.

13. MASONRY REINFORCEMENT SPLICES SHALL CONFORM TO ACI 530, UNLESS OTHERWISE SHOWN.

14. UNFINISHED WALLS AT THE END OF A WORKDAY SHALL BE COVERED TO PREVENT INFILTRATION OF WATER.

STEEL JOIST

1. STEEL JOISTS SHALL BE INSTALLED IN ACCORDANCE THE THE SJI STANDARD SPECIFICATIONS FOR STEEL JOIST CONSTRUCTION, UNLESS OTHERWISE NOTED. WELDERS MUST BE AWS-CERTIFIED.

2. WHERE THE BOTTOM OF A JOIST IS TO BE ATTACHED TO A BEAM, COLUMN OR WALL, THE ATTACHMENT SHALL BE MADE AFTER THE ROOF SYSTEM HAS BEEN INSTALLED AND ATTAINED FULL DEAD LOAD DEFLECTION.

3. MISCELLANEOUS SUPPORTS ATTACHED TO JOISTS SHALL BE LOCATED AT THE PANEL POINTS (NODES) AND SHALL NOT IMPOSE LOADS EXCEEDING 200 POUNDS.

4. ALL JOIST EXTENSIONS SHALL BE PROVIDED AS INDICATED ON THE PLANS OR AS REQUIRED FOR COMPLETE INSTALLATION.

5. ALL JOISTS SHALL BE ANCHORED DOWN AT BEARING POINTS AS SHOWN ON THE STRUCTURAL PLANS.

6. JOISTS SHALL BE DESIGNED FOR 15 LBS. PER SQUARE FOOT OF NET UPLIFT FORCE.

7. THE JOIST MANUFACTURER SHALL VERIFY THE WEIGHTS OF EQUIPMENTS (UNIT HEATERS, ETC.) AND POINTS OF SUPPORTS FOR THE PURPOSE OF SPECIAL JOIST MANUFACTURE, WHERE APPLICABLE.

METAL DECKING

1. ALL STEEL DECK SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO THE SDI "SPECIFICATIONS FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION," AND SHALL BE INSTALLED ACCORDING TO THE PROVISIONS AS OUTLINED WITHIN THE CONTRACT SPECIFICATIONS.

2. ALL STEEL DECK SHALL COMPLY WITH ASTM A446, AND SHALL BE GALVANIZED PER ASTM A525, COATING DESIGNATION G90.

3. METAL DECKING SHALL BE ATTACHED AS SPECIFIED IN SPECIFICATION SECTION 053100 OF THE CONTRACT SPECIFICATIONS.

4. ROOF DECK SHALL BE 1½" WIDE RIB, 18 GAUGE STEEL TYPE B, WITH MINIMUM YIELD STRENGTH OF 33 KSI.  
-SUPPORT FASTENERS: 5/8" PUDDLE WELDS,  
-SIDELAP FASTENERS: 3-#10 TEK SCREWS

5. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIRMENTS OF AWS D1.3.

6. PRIOR TO CONSTRUCTION OF METAL DECK, TESTS MUST BE PERFORMED TO DETERMINE IF THE THICKNESS OF THE METAL DECK IS ADEQUATE TO SUSTAIN PUDDLE WELDING WITHOUT EXCESSIVE BLOWOUT OF THE MATERIAL. IF FOUND TO BE NOT ADEQUATE, PUDDLE WASHERS MUST BE USED IN THE ENTIRE DECK CONSRUCTION.

GENERAL NOTES

1. THE STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH OTHER DISCIPLINE DRAWINGS AND WITH EQUIPMENT MANUFACTURERS TO ENSURE THAT OPENINGS IN THE ROOF AND WALLS ARE PROVIDED WITH THE REQUIRED APPURTENANT FRAMING OR SUPPORT SYSTEM.

2. DIMENSIONS AND DETAILS RELATED TO THE SIZE AND LOCATION OF EQUIPMENT SHALL BE VERIFIED WITH THE EQUIPMENT MANUFACTURER PRIOR TO CONSTRUCTION.

3. SIZES AND LOCATIONS OF EMBEDDED MECHANICAL AND ELECTRICAL FIXTURES SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

4. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITIES OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND IMPLEMENTING THE NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

5. TEMPORARY BRACING, SHEETING, SHORING AND OTHER SIMILAR SAFETY PRECAUTIONARY MEASURES DURING CONSTRUCTION ARE THE RESPONSIBILITIES OF THE CONTRACTOR AND SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY HIM.

THE CONTRACTOR SHALL REPAIR, AT THEIR OWN EXPENSE, ANY DAMAGE TO THE STRUCTURES AND APPURTENANCES DUE TO CONTRACTOR'S CONSTRUCTION OPERATIONS.

7. THE IMPLEMENTATION OF JOB SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

ABBREVIATIONS

BRG BEARING

B.F.E. BOTTOM OF FOOTING ELEVATION

B.O.S. BOTTOM OF STEEL

B.O.G. BOTTOM OF GIRT

C CENTER LINE

CJ CONTROL (CONTRACTION) JOINT

CLR CLEAR

COL COLUMN

CONC CONCRETE

CONC BLK CONCRETE BLOCK

CONT CONTINUOUS

DET DETAIL

DIA; Ø DIAMETER

DL DOUBLE ANGLE

EA EACH

EL ELEVATION

EQ EQUAL

EJ EXPANSION (ISOLATION) JOINT

EW EACH WAY

FD FLOOR DRAIN

FH FLIPPED HORIZONTALLY

FV FLIPPED VERTICALLY

FFE FINISH FLOOR ELEVATION

FT FOOT

GRT GIRT

HP HIGH POINT

HT HEIGHT

JT JOINT

LP LOW POINT

MAINT MAINTENANCE

MATL MATERIAL

MET METAL

MFR MANUFACTURER

MIN MINIMUM

M.O. MASONRY OPENING

NTS NOT TO SCALE

O.C. ON CENTER

OH OVERHEAD

PL PLATE

REINF REINFORCED

REQ REQUIRED

RO ROUGH OPENING

RD ROOF DRAIN

SECT SECTION

SIM SIMILAR

SP SPECIAL

SQ SQUARE

STRUCT STRUCTURAL

T & B TOP AND BOTTOM

TOC TOP OF CONCRETE

TOCH TOP OF CHANNEL

T.O.B. TOP OF BEAM

TOG TOP OF GRATE

TOJ TOP OF JOIST

TOKW TOP OF KNEEWALL

T.O.P. TOP OF PIER

T.O.S. TOP OF STEEL

TS STRUCTURAL STEEL TUBING

T.W.E. TOP OF WALL ELEVATION

TYP TYPICAL

UON UNLESS OTHERWISE NOTED

UOS UNLESS OTHERWISE SHOWN

VL VALLEY LINE (FLOOR DRAINAGE)

W/ WITH

WWR WELDED WIRE REINFORCEMENT

DESIGNER/DRAFTER:

DCS

CHECKED BY:

RPL

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

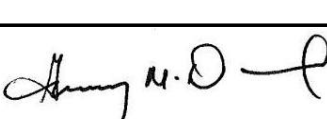
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APPROVED BY:



PROJECT TITLE:

OCCUM MAINTENANCE FACILITY

TOWN:

OCCUM

DRAWING TITLE:

GENERAL NOTES AND ABREVEATIONS

PROJECT NO.

103-247

DRAWING NO.

S-002

SHEET NO.

06.02

REV.

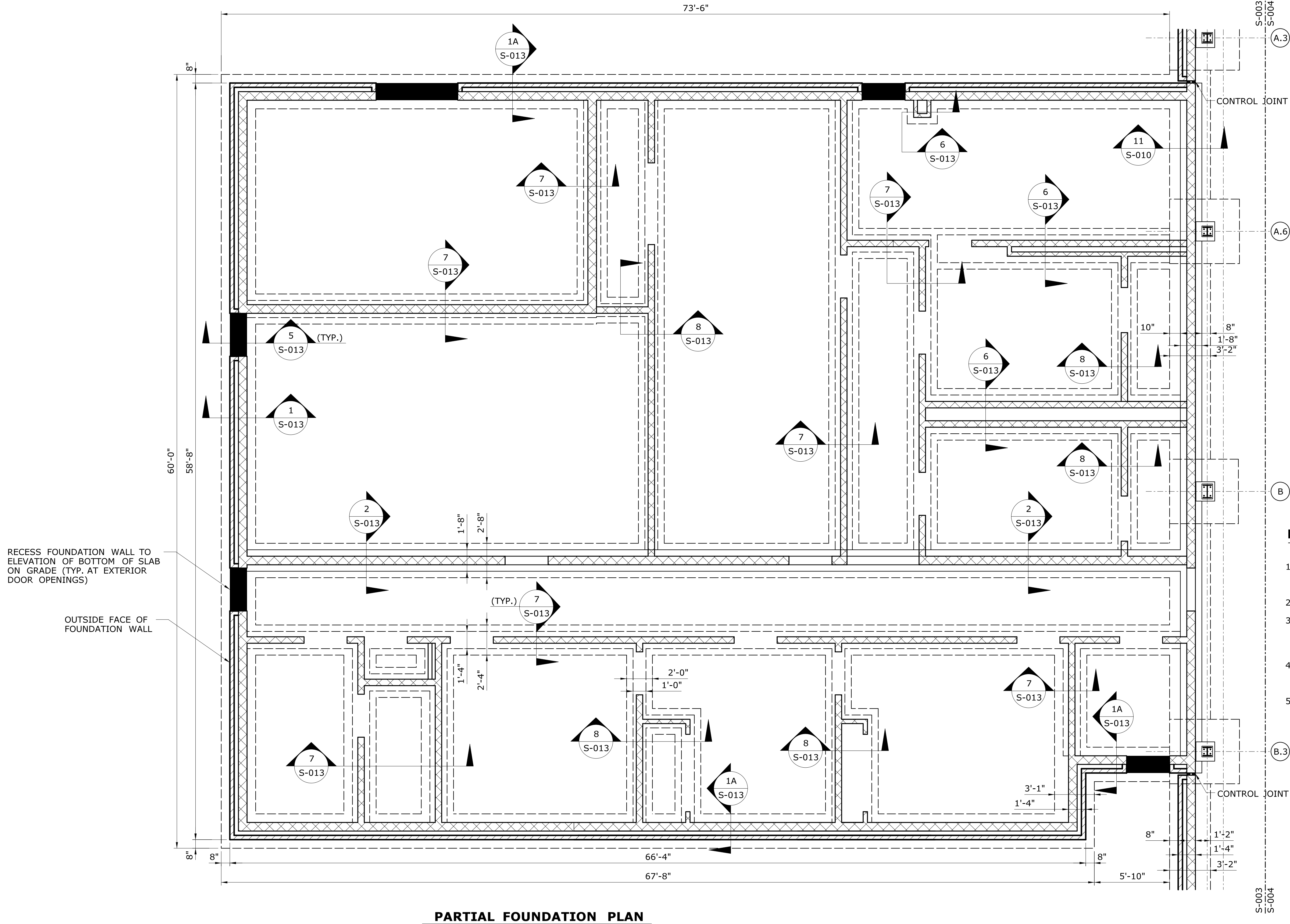
DATE

REVISION DESCRIPTION

SHEET NO.

Plotted Date: 7/22/2015

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.



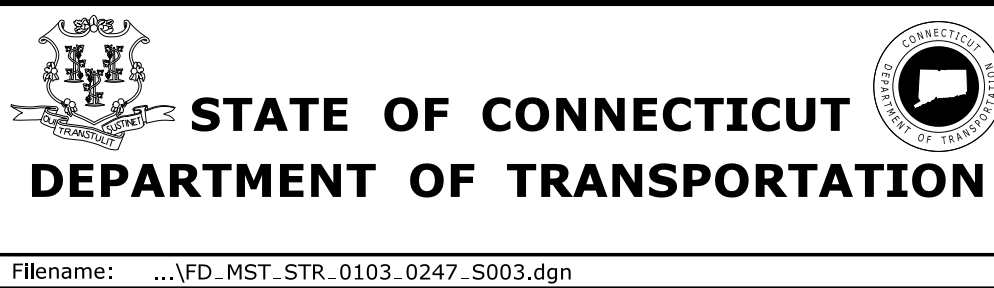
**PARTIAL FOUNDATION PLAN**  
**SCALE: 1/4" = 1'-0"**

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/11/2015

DESIGNER/DRAFTER:  
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**RPL**  
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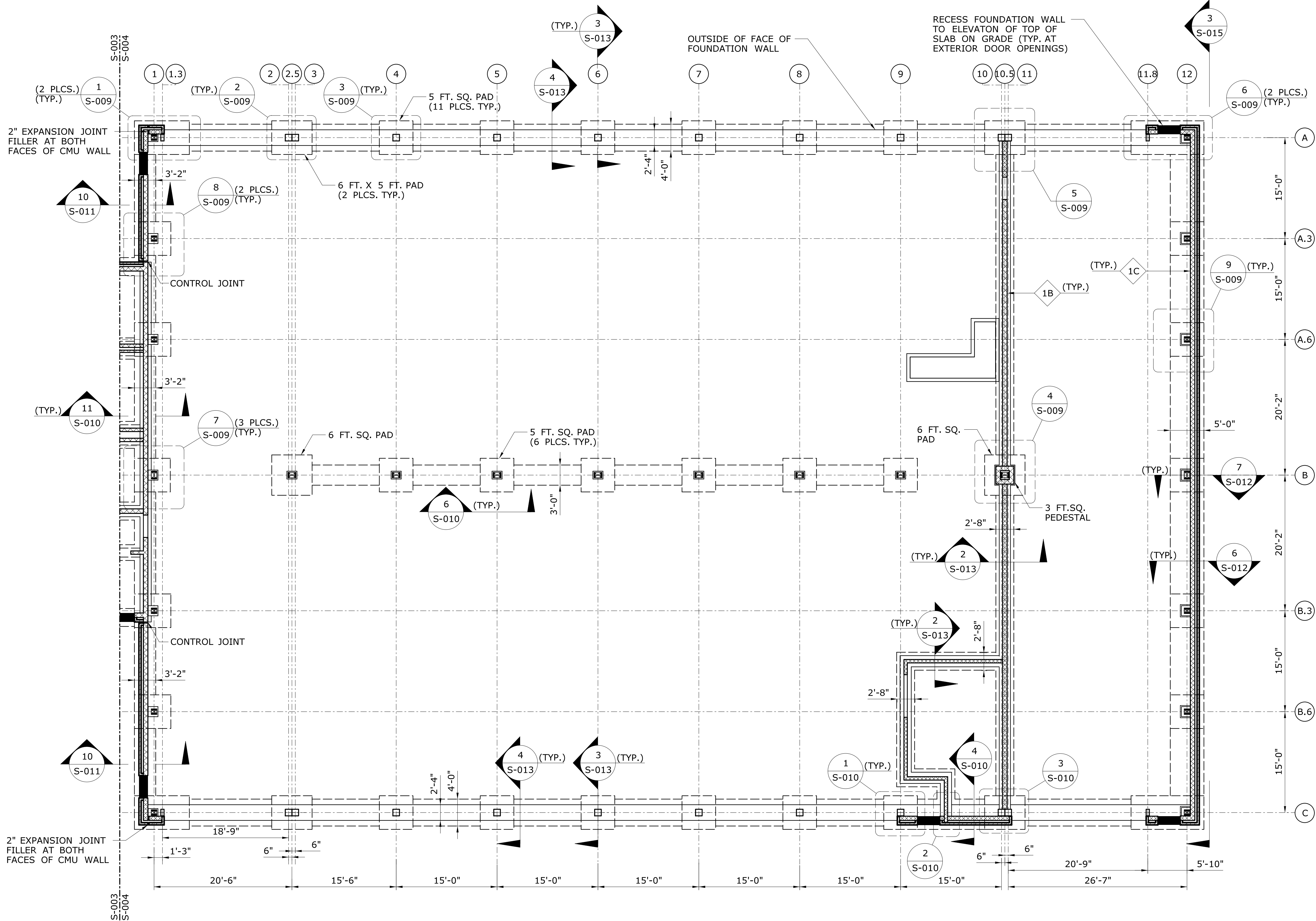


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PROJECT TITLE:  
**OCCUM  
MAINTENANCE  
FACILITY**

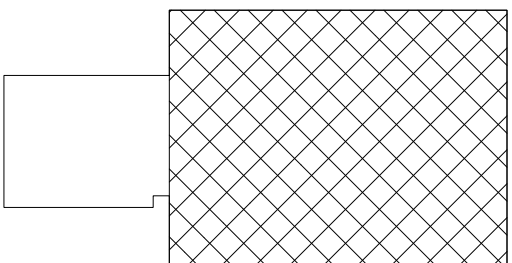
TOWN:  
**OCCUM**  
DRAWING TITLE:  
**FOUNDATION PLAN-1**

PROJECT NO.  
**103-247**  
DRAWING NO.  
**S-003**  
SHEET NO.  
**06.03**



**LEGEND:**

- 1B 8-INCH THK. CMU WITH 2-INCH THK. GLAZING FOR THE BOTTOM 10 FEET. FULL-HEIGHT 3-HOUR FIRE-RATED WALL. REFER TO WALL SECTION 2/A-310.
- 1C 8-INCH THK. CMU WITH 2-INCH THK. GLAZING 9'-4" TALL. REFER TO WALL SECTION 1/A-310.



GENERAL NOTE: ALL NOTES OF THE FOUNDATION PLAN IN THIS SHEET SHALL BE REFERRED TO THE "FOUNDATION NOTES" IN DRAWING NO. S-003.

**PARTIAL FOUNDATION PLAN**

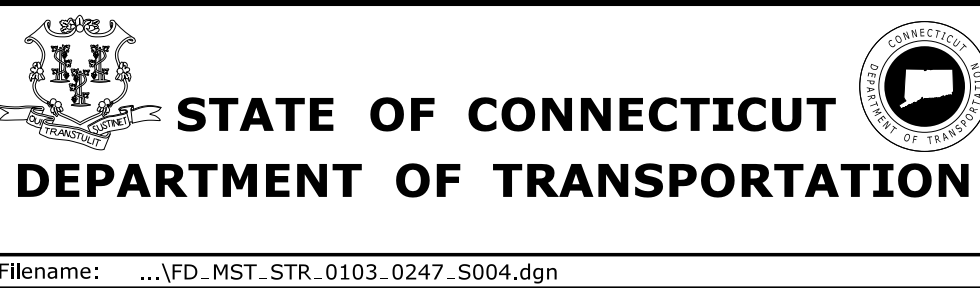
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/11/2015

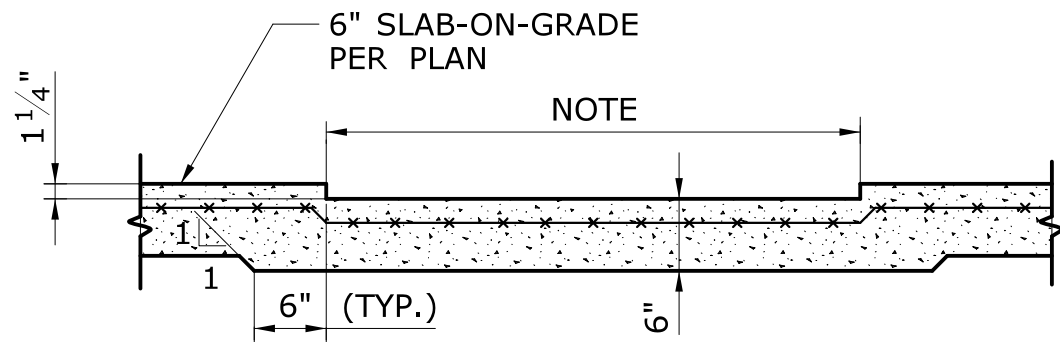
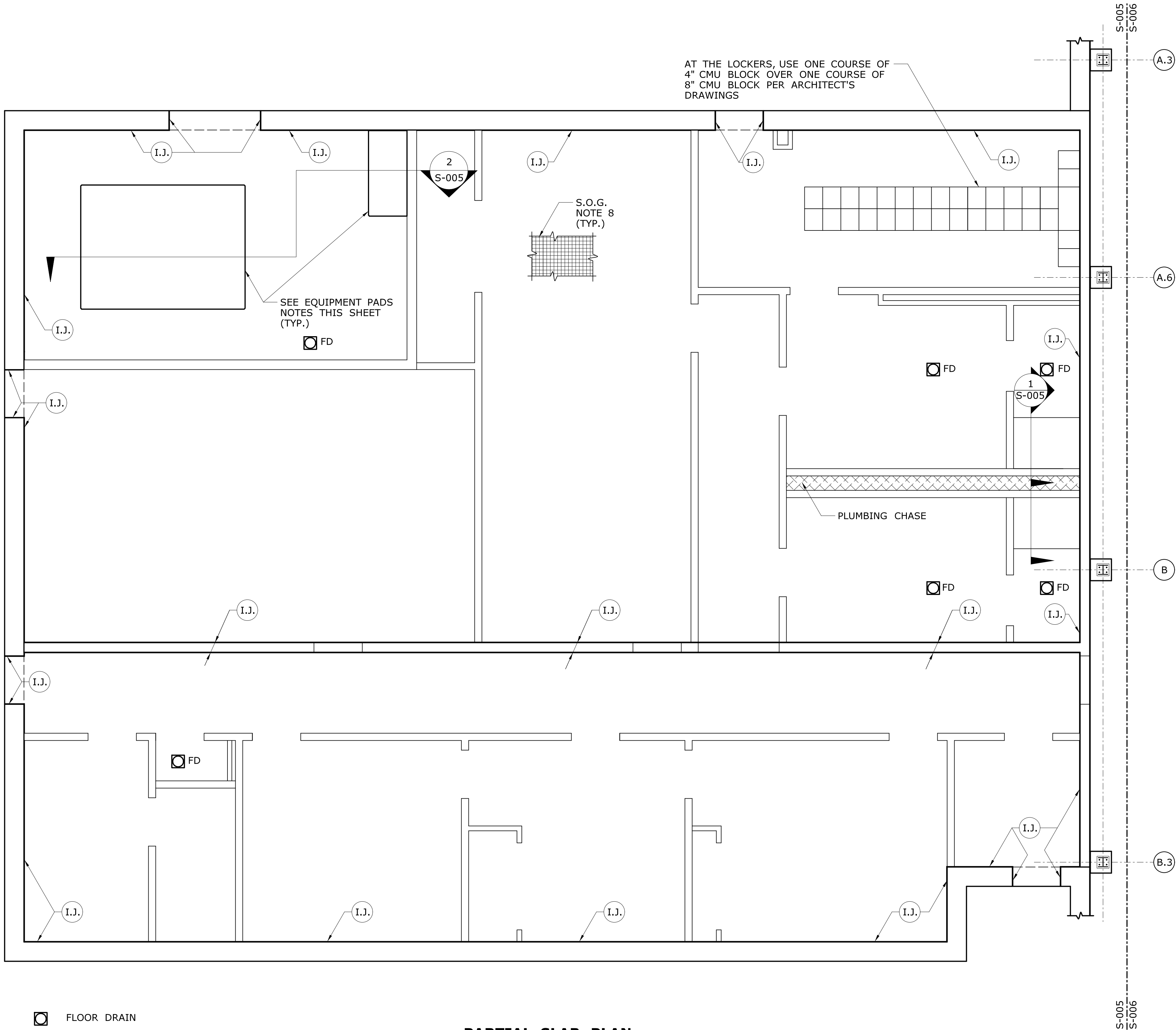
DESIGNER/DRAFTER:  
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**RPL**  
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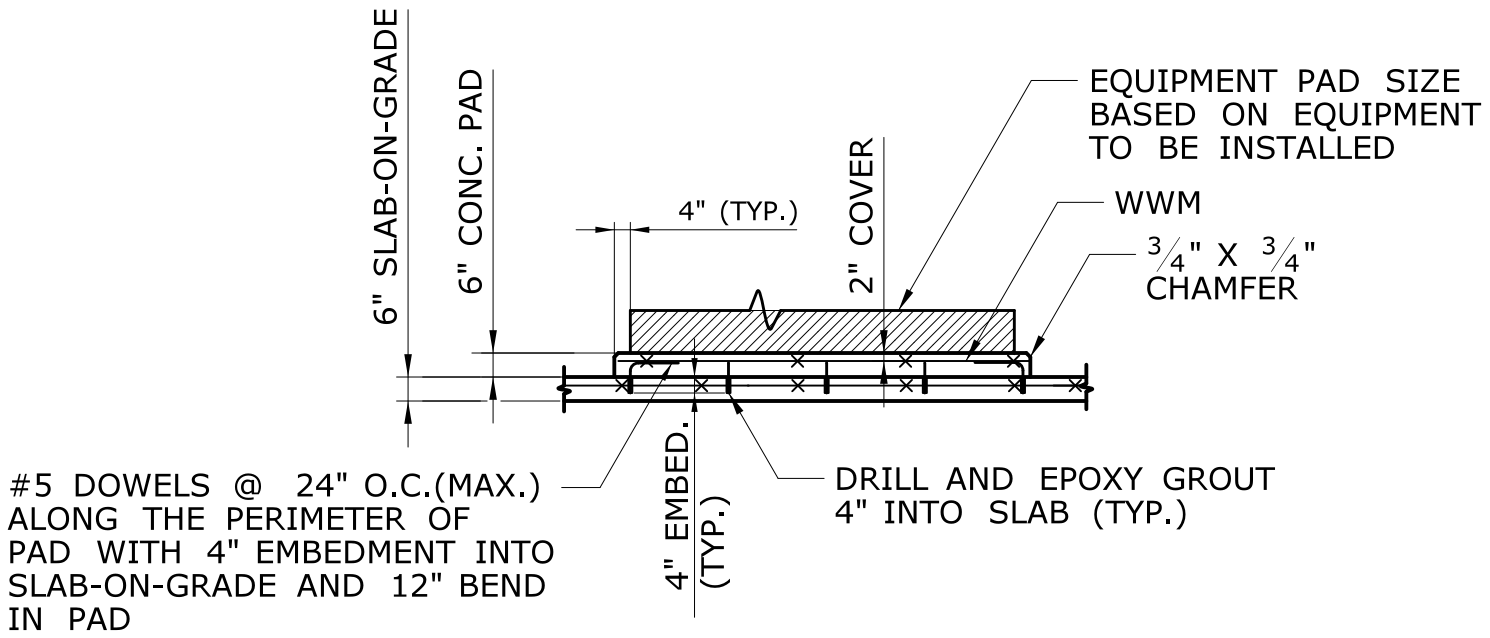
PROJECT TITLE:  
**OCCUM MAINTENANCE FACILITY**

TOWN:  
**OCCUM**  
DRAWING TITLE:  
**FOUNDATION PLAN-2**  
PROJECT NO.  
**103-247**  
DRAWING NO.  
**S-004**  
SHEET NO.  
**06.04**



NOTE: ALL DIMENSIONS SHALL BE VERIFIED WITH THE MANUFACTURER OF THE SHOWER UNIT.

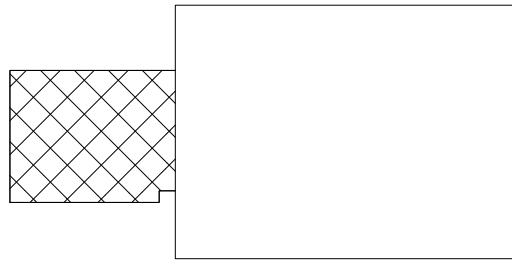
**SECTION 1**  
SCALE:  $\frac{3}{4}" = 1'-0"$   
**S-005**



**SECTION 2**  
SCALE:  $\frac{1}{4}" = 1'-0"$   
**S-005**

**EQUIPMENT PADS NOTES**

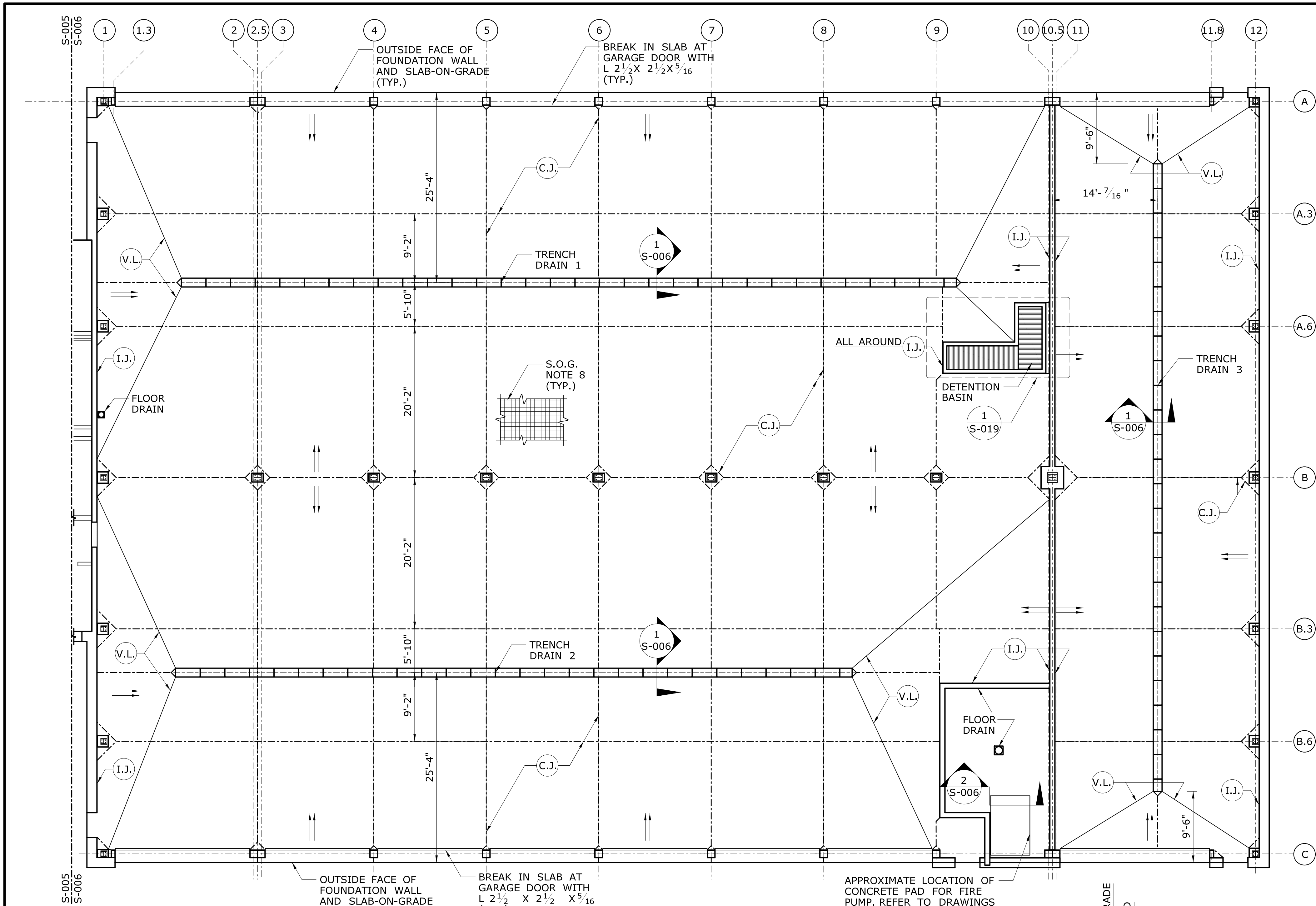
1. THE CONTRACTOR MUST VERIFY THE REQUIRED AREA OF PAD TO SUPPORT EACH EQUIPMENT FROM THE RESPECTIVE EQUIPMENT MANUFACTURER.
2. THE CONTRACTOR MUST COORDINATE THESE LAYOUTS WITH THE MECHANICAL ENGINEER'S AND ARCHITECT'S DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENTS.
3. ALL VERTICAL AND HORIZONTAL EDGES OF THE PADS THAT ARE EXPOSED TO TRAVEL PATHS MUST HAVE A  $\frac{3}{4}" \times \frac{3}{4}"$  CHAMFER.



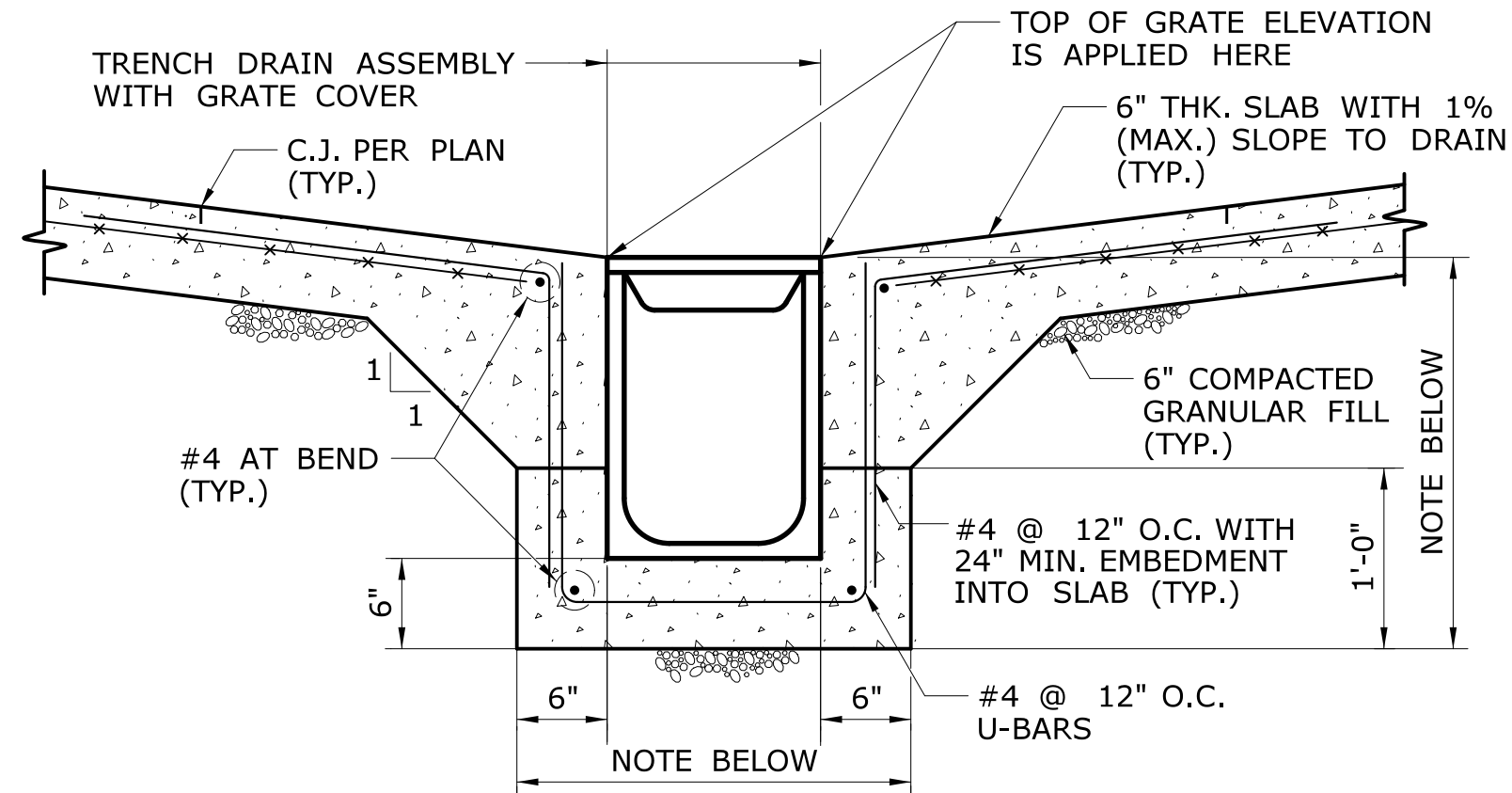
GENERAL NOTE: ALL NOTES, OF THE SLAB PLAN IN THIS SHEET SHALL BE REFERRED TO THE "SLAB NOTES" IN DRAWING NO. S-006.

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**PARTIAL SLAB PLAN**  
SCALE: 1/8" = 1'-0"



NOTE: THESE DIMENSIONS SHALL BE DETERMINED BASED ON THE WIDTH AND DEPTH OF THE GRATE ASSEMBLY.

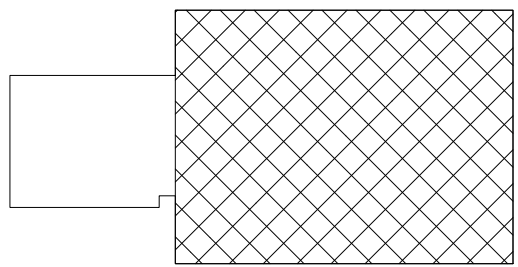
**SECTION 1**  
SCALE: 3/4" = 1'-0"  
**S-006**

**LEGEND**

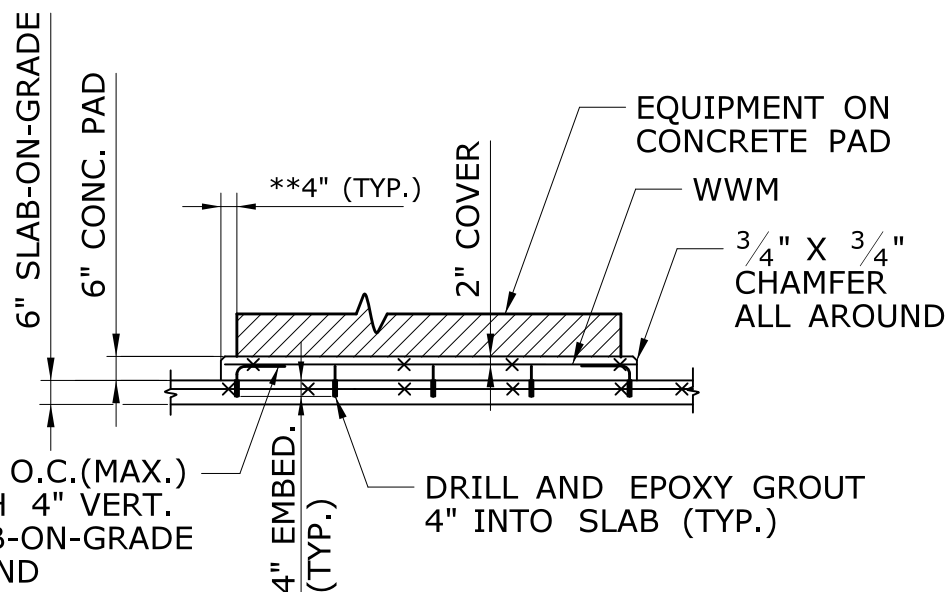
- I.J. - 1/2" WIDE ISOLATION JOINT ALONG PERIMETER WALLS AND BOTH SIDES OF INTERIOR WALLS. REFER TO WALL SECTIONS.
- C.J. - CONTROL JOINT AS SHOWN ON SLAB PLAN
- V.L. - VALLEY LINE IN FLOOR DRAINAGE

**SLAB NOTES**

- FOR ELEVATION OF DRAINS, SEE PLUMBING DRAWINGS.
- W.W.R. REINFORCEMENT SHALL BE PLACED IN THE TOP THIRD OF THE SLAB.
- PLACE VAPOR BARRIER UNDER SLAB (TYP.)
- IF ACCORDING TO THE ENGINEER, CONSTRUCTION JOINTS BECOME NECESSARY, THEY ARE TO BE CONSTRUCTED USING THE CONSTRUCTION JOINT DETAIL SHOWN ON DRAWING S-020.
- CONTROL JOINTS FORMED BY SAWCUT SHALL BE EFFECTED AT NO LATER THAN 6 HOURS AFTER CONCRETE HAS SET.
- REFER TO MISCELLANEOUS CONCRETE DETAILS, S-020, FOR ALL APPLICABLE DETAILS IN THE CONSTRUCTION OF SLAB AND WALLS, UNLESS NOTED OTHERWISE.
- SLOPE FLOOR TO DRAIN WITH 1FT. RADIUS OF DRAIN EDGE. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION AND DRAIN ELEVATION (TYP.)
- 6-INCH THICK SLAB-ON-GRADE (WITH 6 X 6 W4.0/4.0) ON APPROVED VAPOR BARRIER ON 6-INCH COMPACTED GRANULAR FILL (TYP. THROUGHOUT)
- REFER TO MECHANICAL AND PLUMBING SHEETS FOR THE EXACT LOCATIONS OF DRAINS.



KEY PLAN



\*\*NOTE: THE SIZE OF PAD SHALL BE BASED ON THE SIZE OF THE SUPPORTED EQUIPMENT.

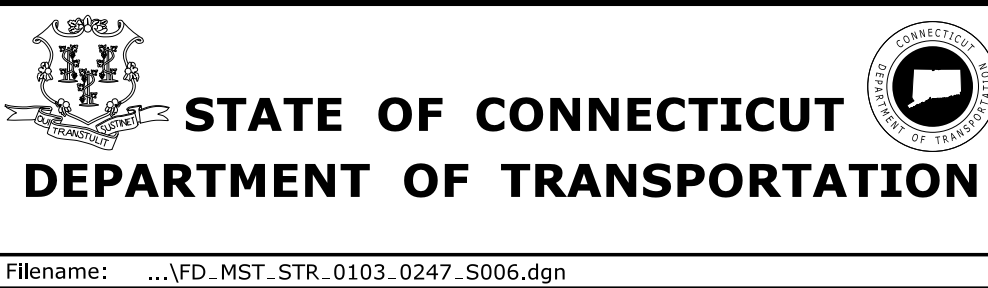
**SECTION 2**  
No Scale  
**S-006**

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/11/2015

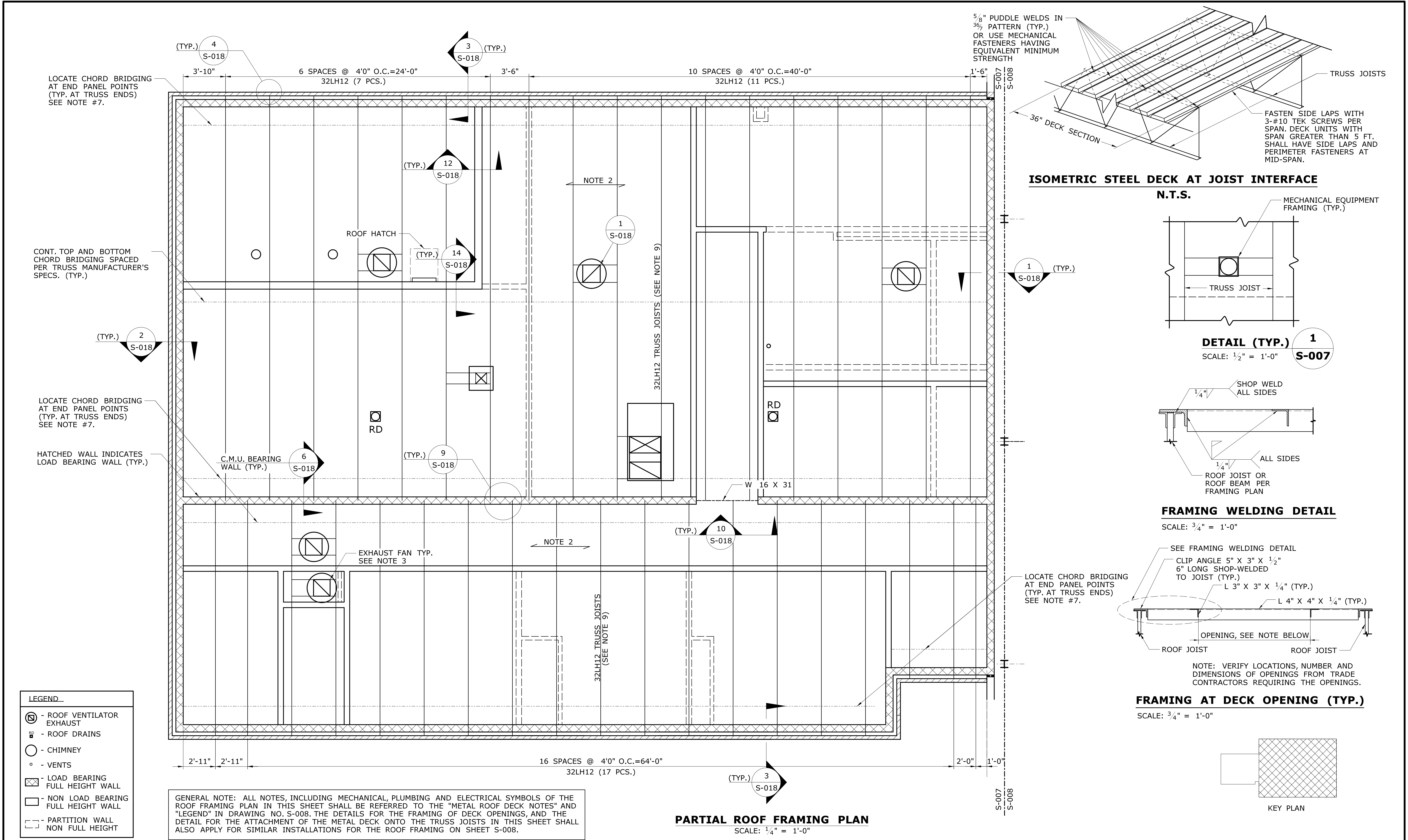
DESIGNER/DRAFTER:  
**DCS**  
CHECKED BY:  
**RPL**  
SCALE AS NOTED



SIGNATURE/BLOCK:  
**OFFICE OF ENGINEERING**  
APPROVED BY:  
*Anthony N. D. P.*

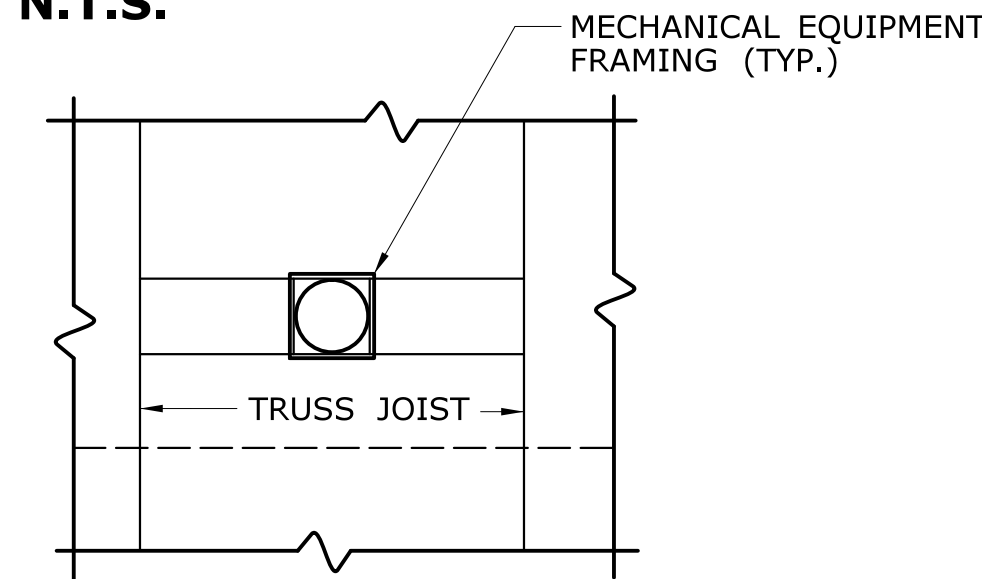
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**OCCUM MAINTENANCE FACILITY**

TOWN:  
**OCCUM**  
DRAWING TITLE:  
**SLAB PLAN-2**  
PROJECT NO.:  
**103-247**  
DRAWING NO.:  
**S-006**  
SHEET NO.:  
**06.06**



ISOMETRIC STEEL DECK AT JOIST INTERFACE

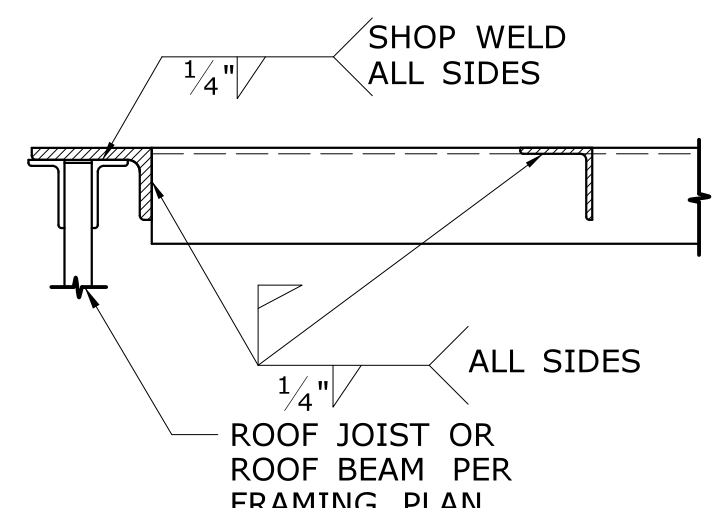
N.T.S.



DETAIL (TYP.)

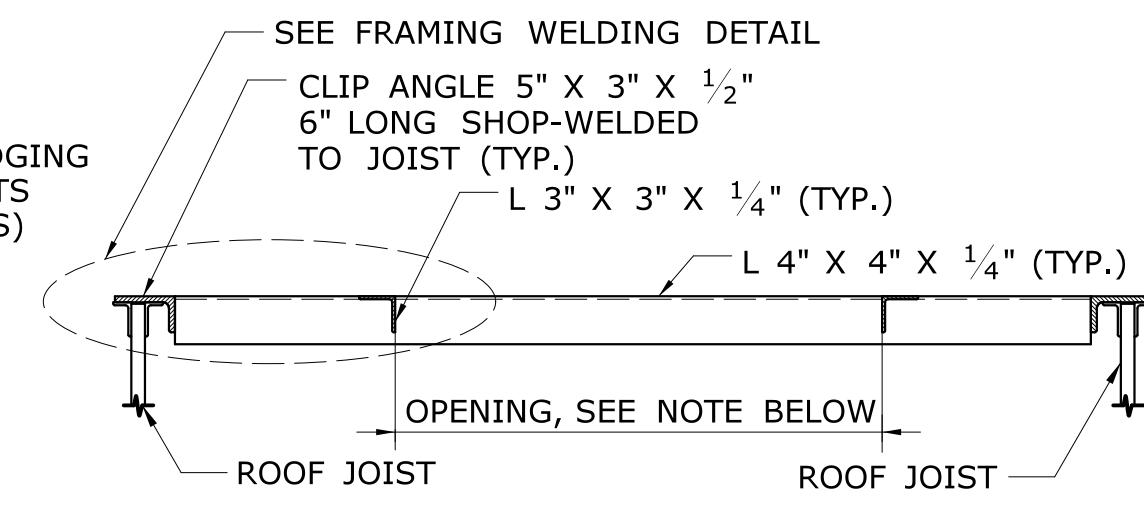
SCALE: 1/2" = 1'-0"

1  
S-007



FRAMING WELDING DETAIL

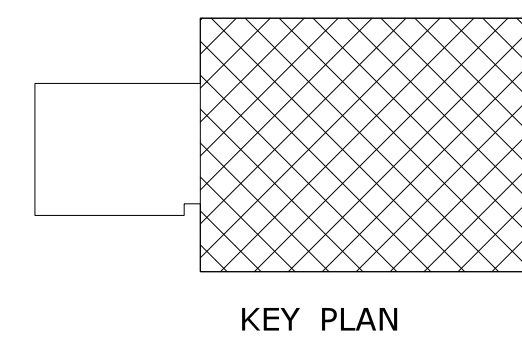
SCALE: 3/4" = 1'-0"



NOTE: VERIFY LOCATIONS, NUMBER AND DIMENSIONS OF OPENINGS FROM TRADE CONTRACTORS REQUIRING THE OPENINGS.

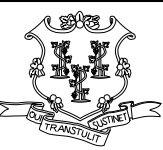

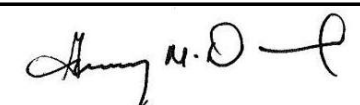
FRAMING AT DECK OPENING (TYP.)

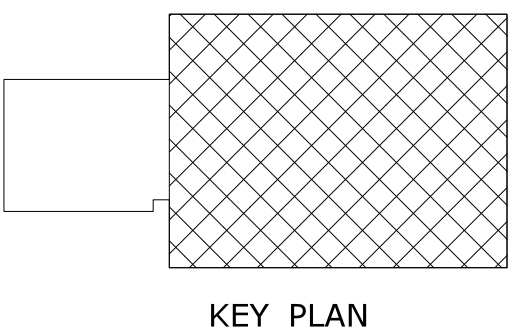
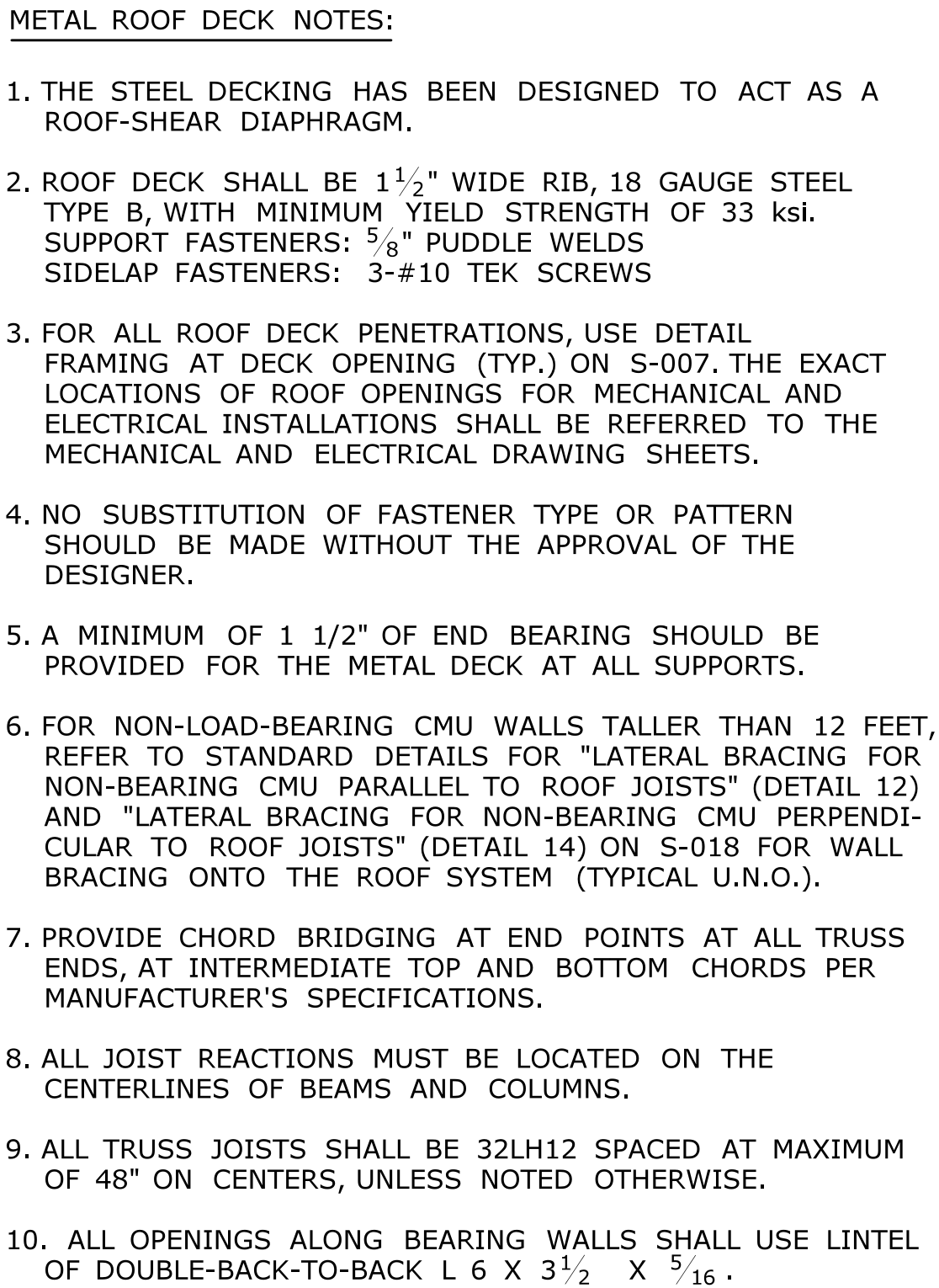
SCALE: 3/4" = 1'-0"





PARTIAL ROOF FRAMING PLAN

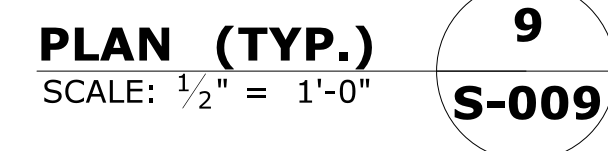
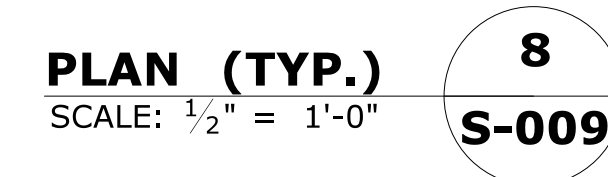
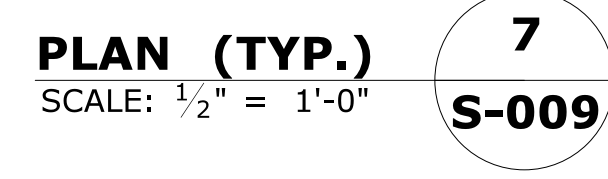
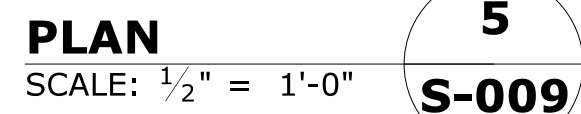
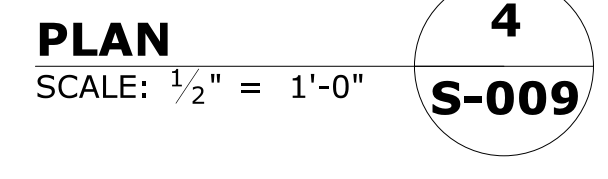
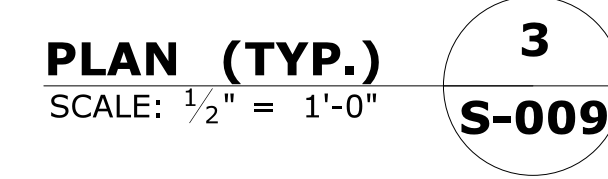
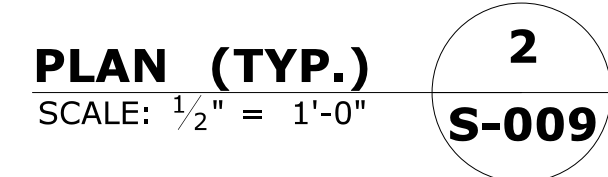
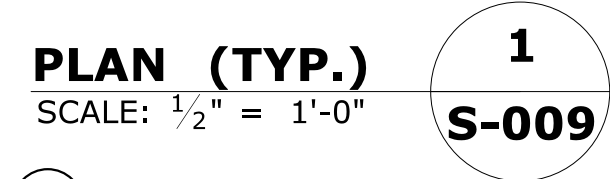
SCALE: 1/4" = 1'-0"

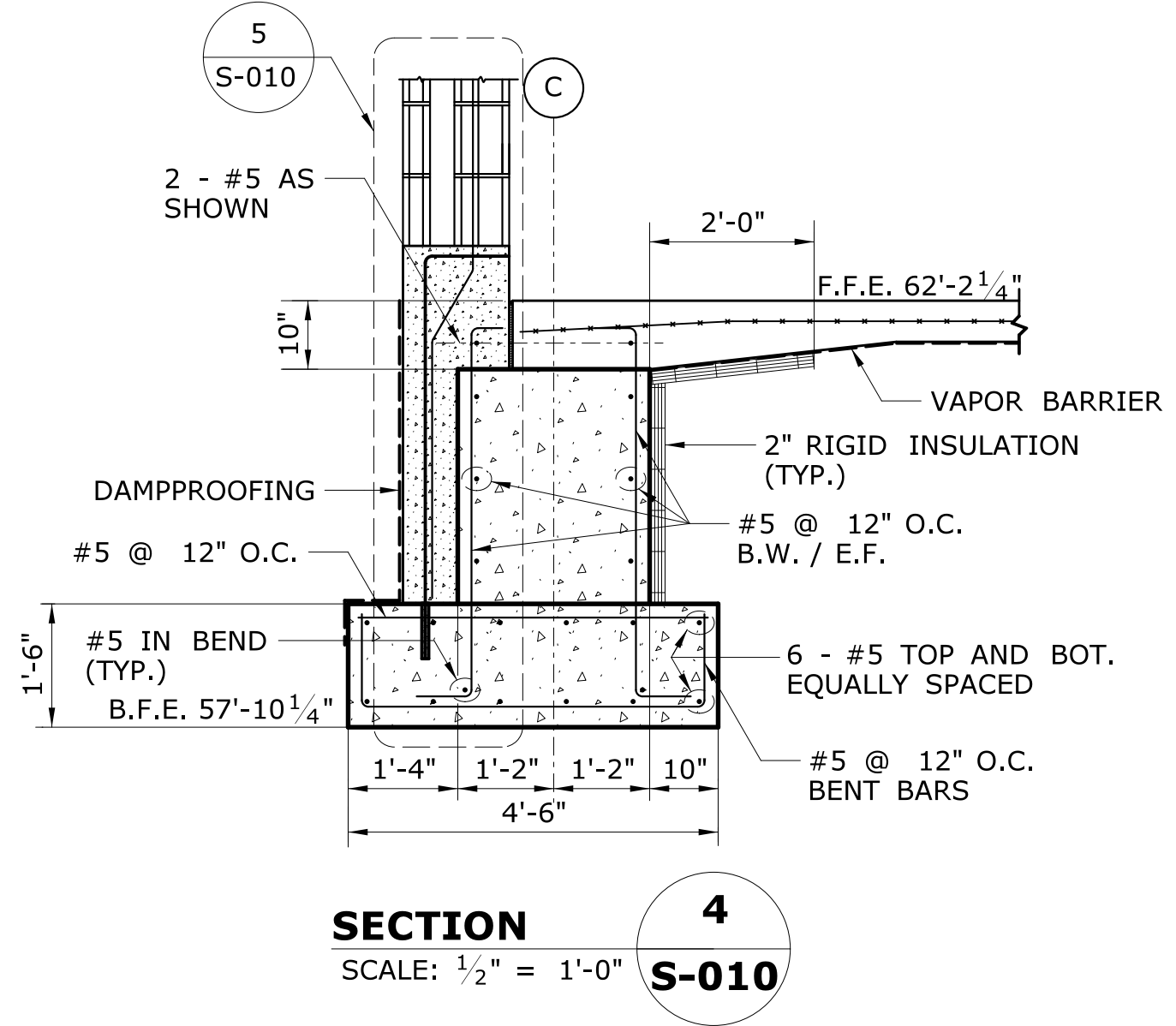
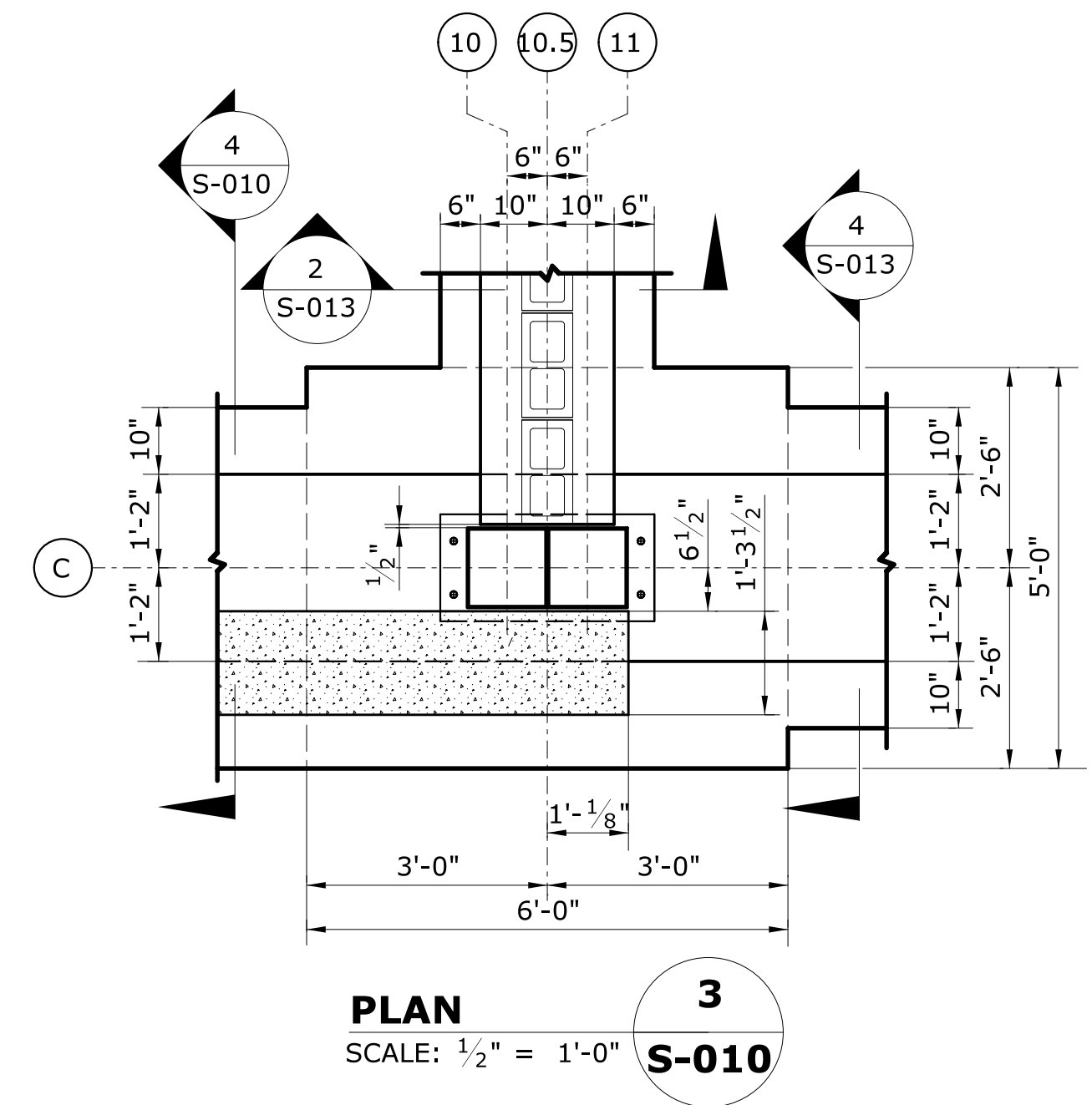
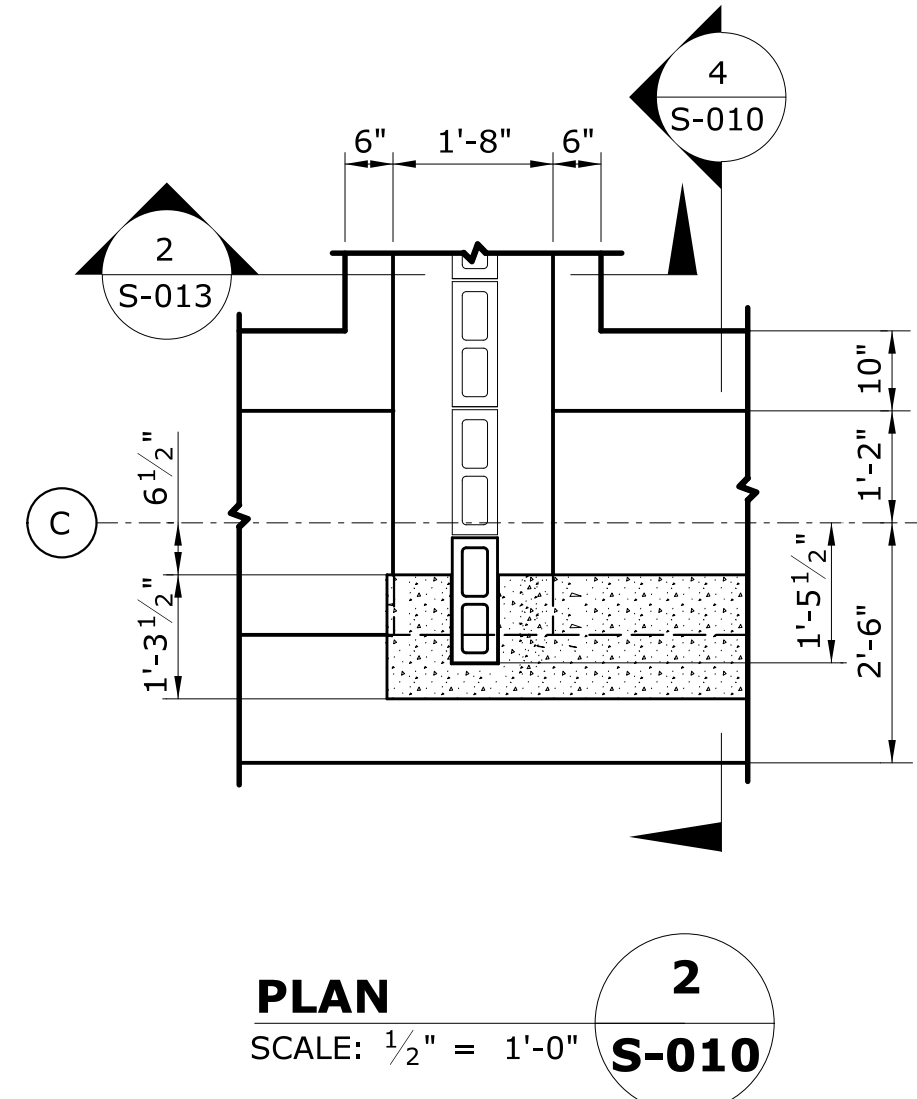
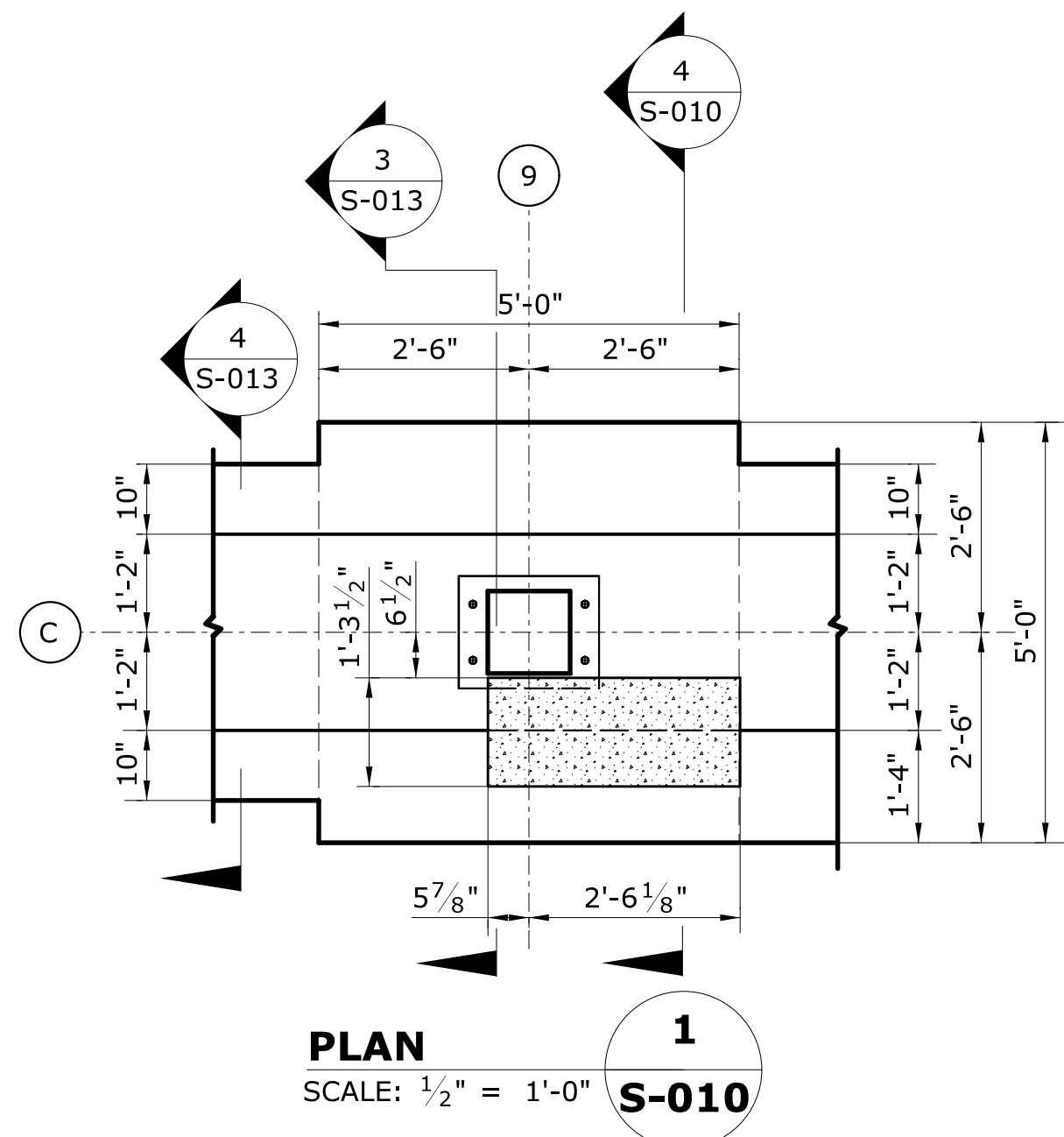
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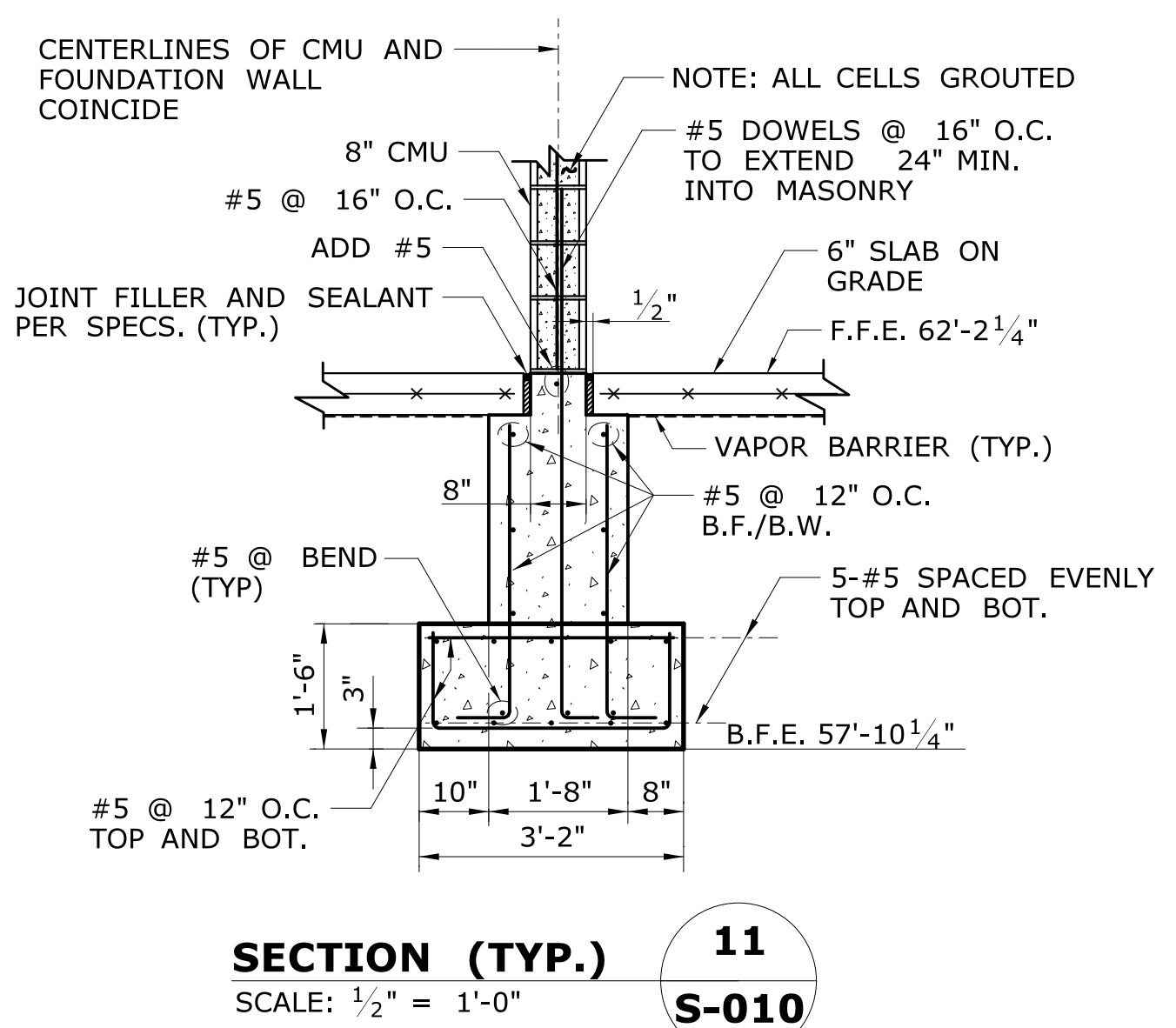
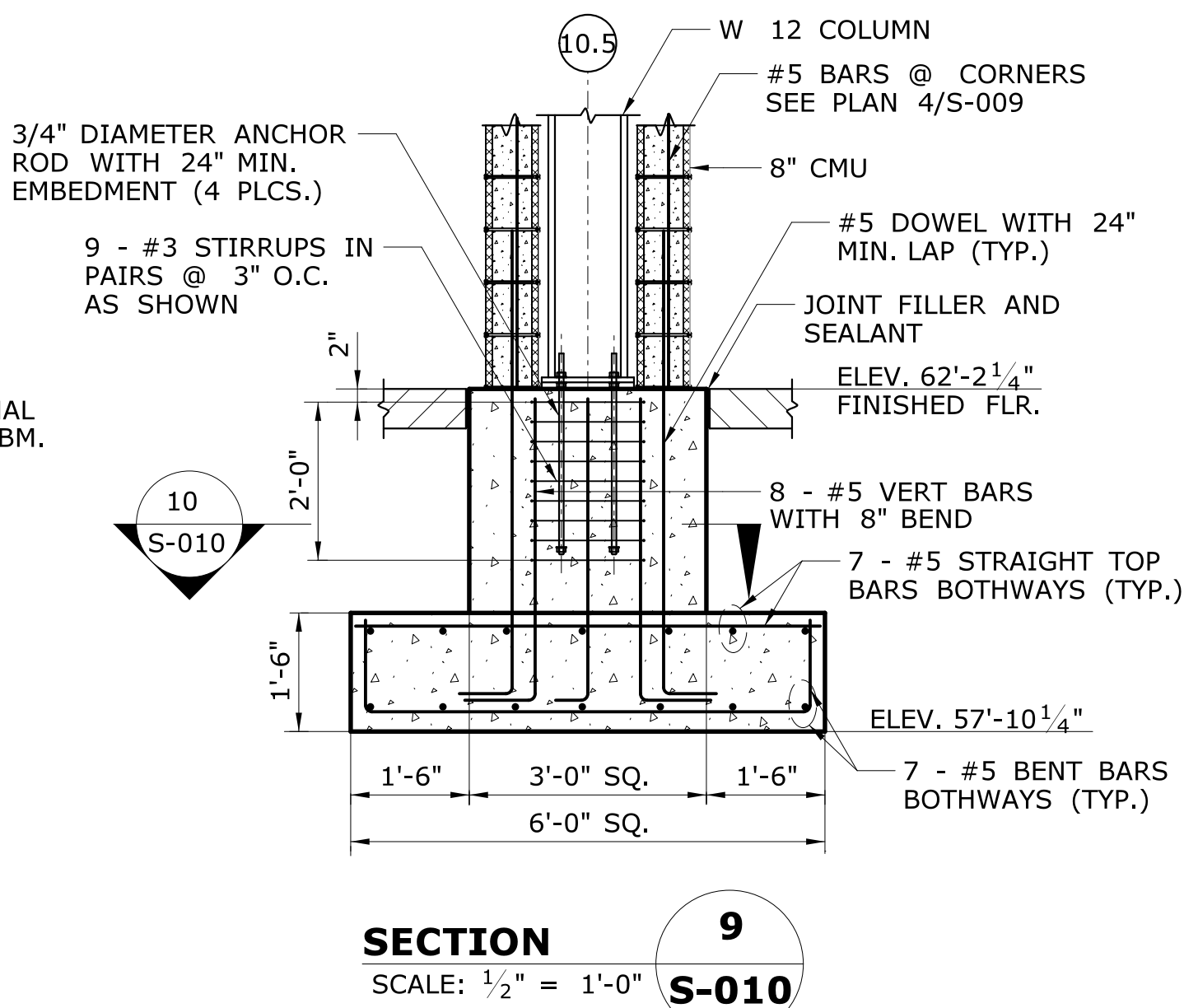
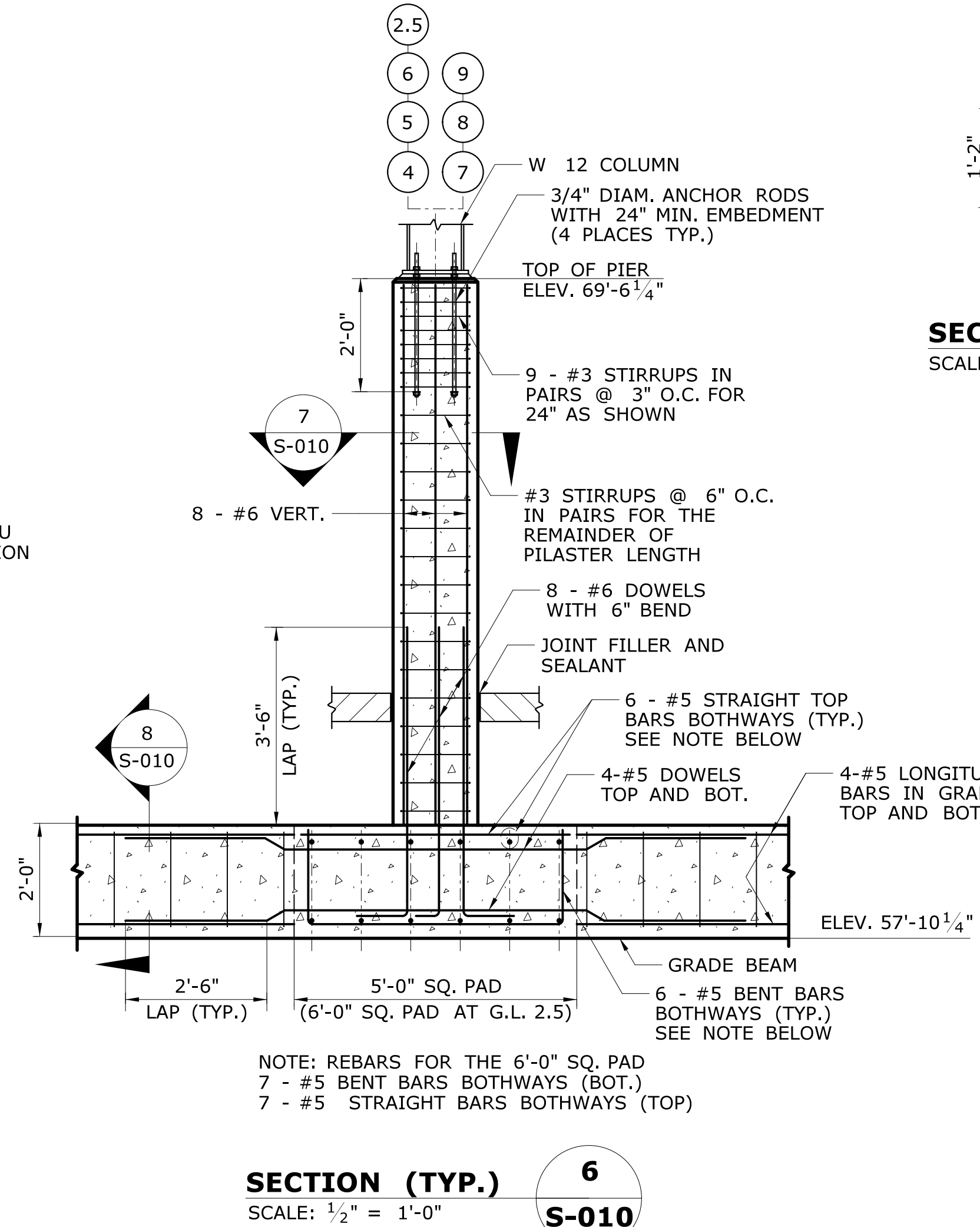
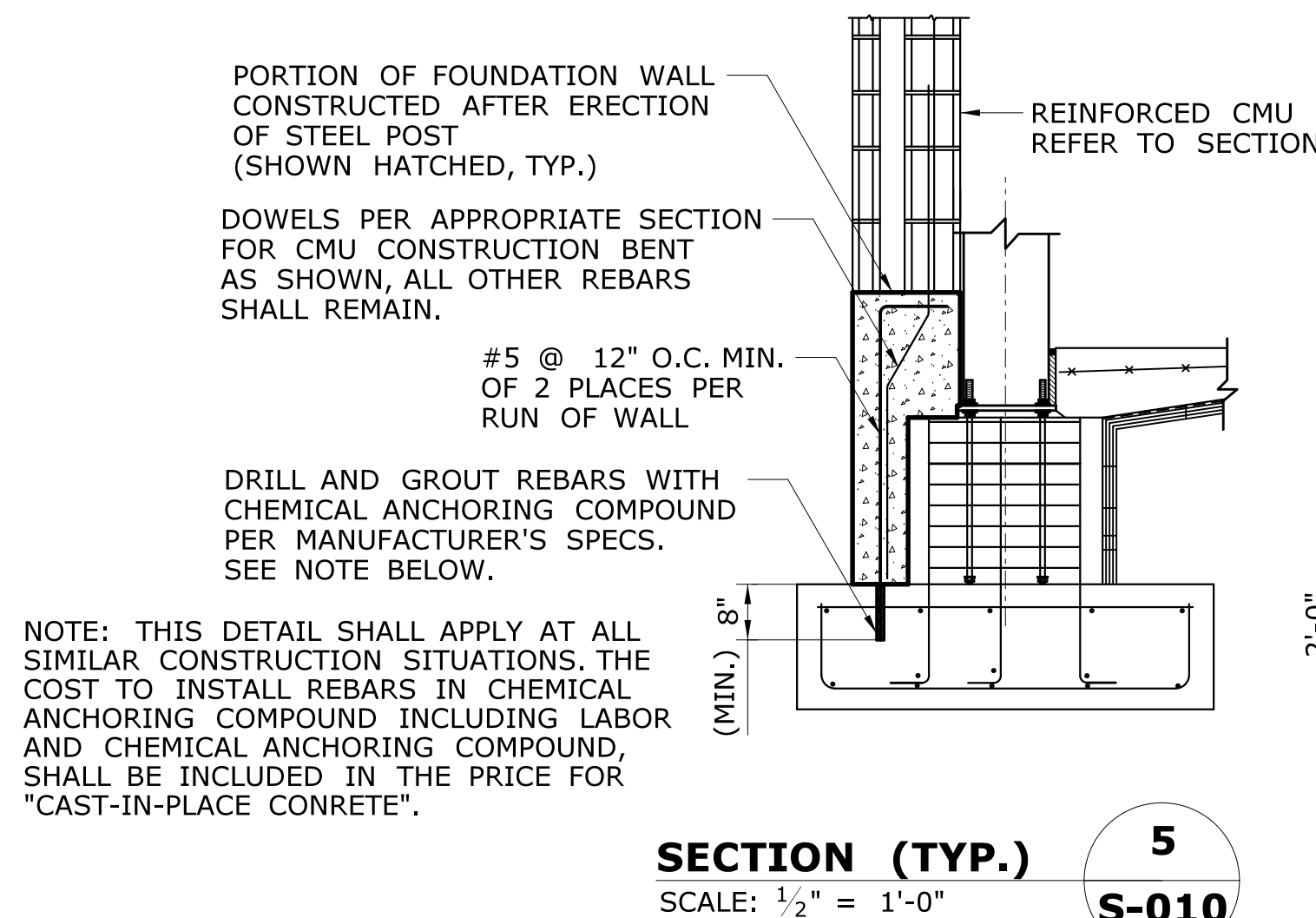
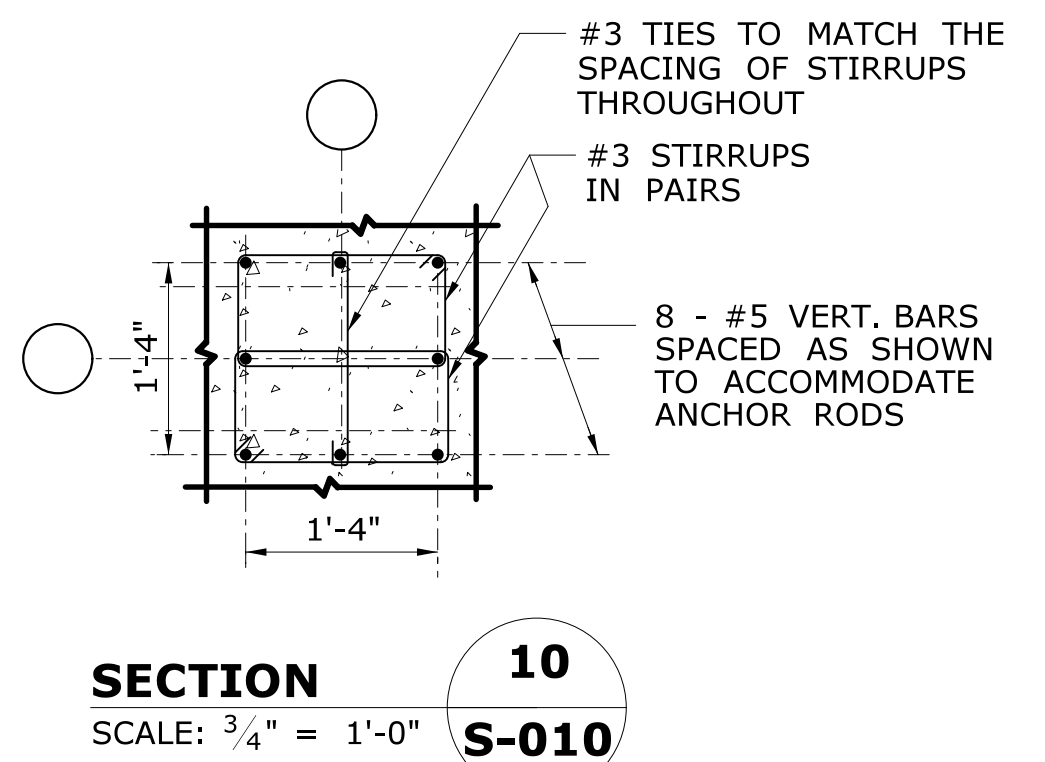
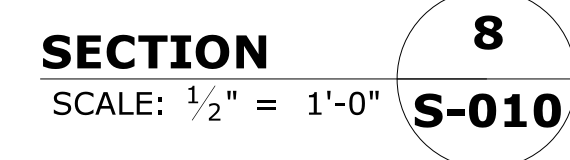
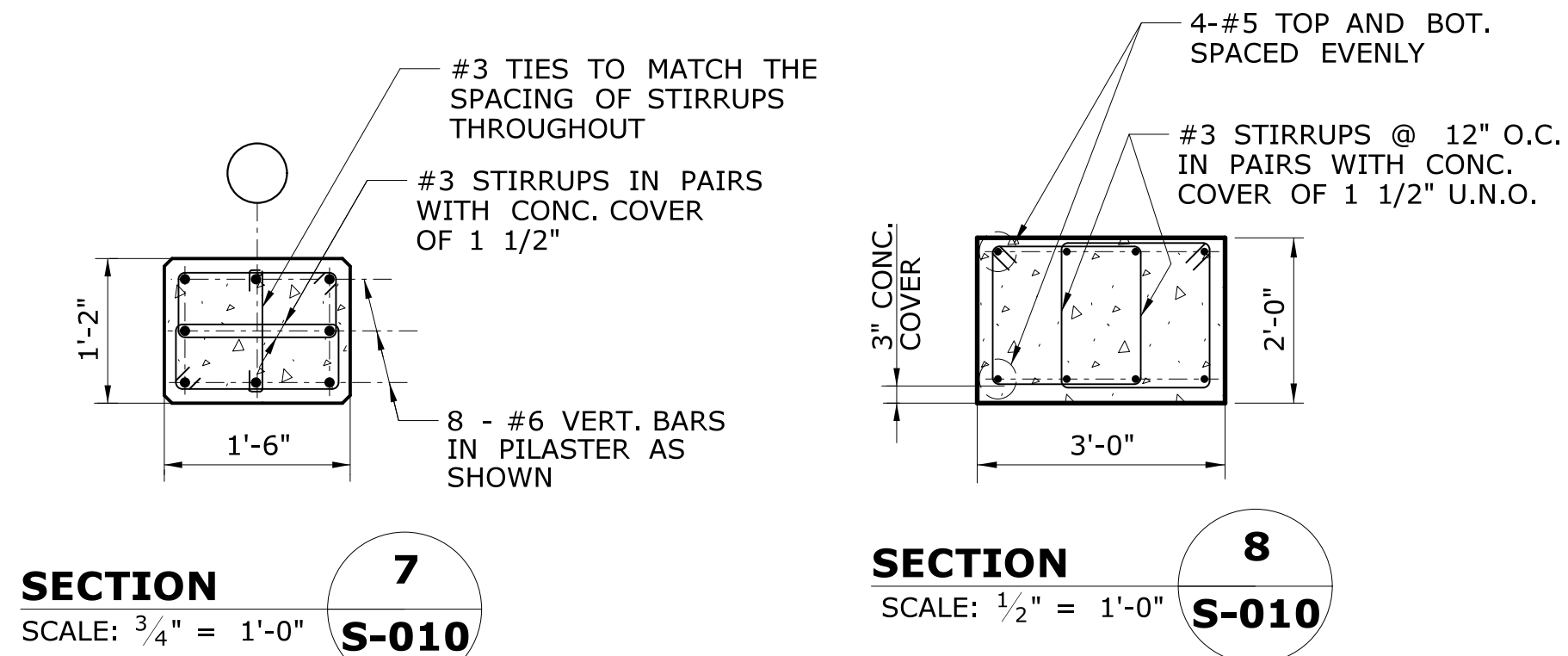
-	-	-	-	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: <b>DCS</b>	 <b>STATE OF CONNECTICUT</b> <b>DEPARTMENT OF TRANSPORTATION</b>	SIGNATURE/ BLOCK:  <b>OFFICE OF ENGINEERING</b>	PROJECT TITLE:  <b>OCCUM MAINTENANCE FACILITY</b>	TOWN:  <b>OCCUM</b>	PROJECT NO. <b>103-247</b>
-	-	-	-	CHECKED BY: <b>RPL</b>	APPROVED BY: 		DRAWING NO. <b>S-008</b>			
-	-	-	-	SCALE AS NOTED	Filename: ...FD_MST_STR_0103_0247_5008.dgn		SHEET NO. <b>06.08</b>			
REV.	DATE	REVISION	DESCRIPTION	SHEET NO.	Plotted Date: 6/11/2015					



[illegible]



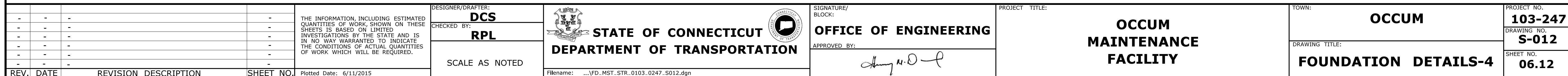
BUILT-UP PORTION OF FOUNDATION WALL FOR CMU WALL AND BRICK VENEER TO BE CONSTRUCTED AFTER THE ERECTION OF STEEL POST. REFER TO SECTION 5/S010 (TYP.)



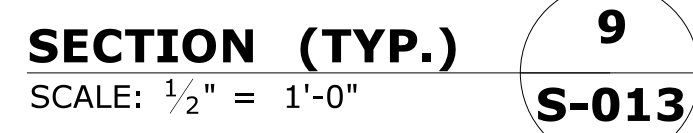
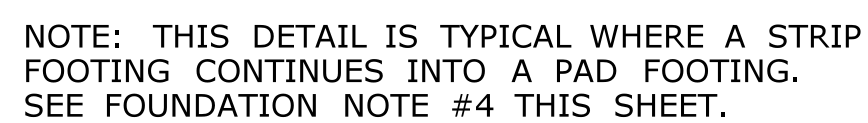
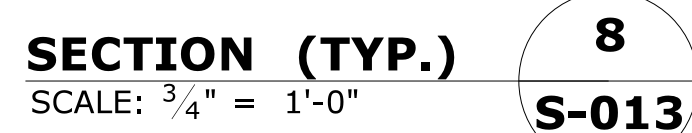
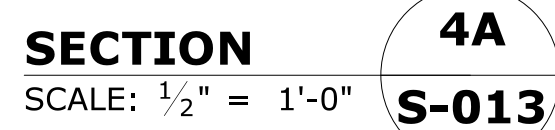
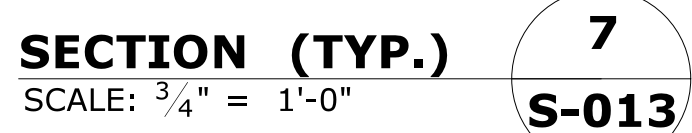
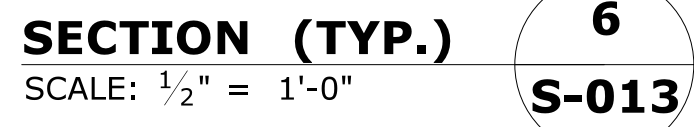
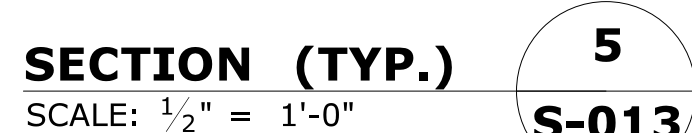
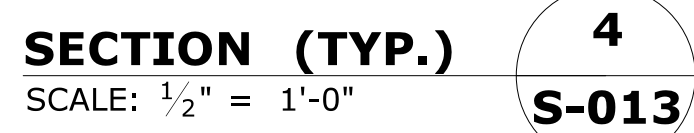
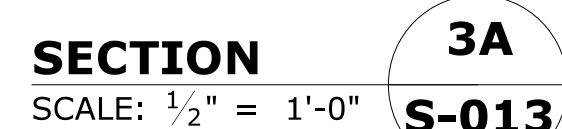
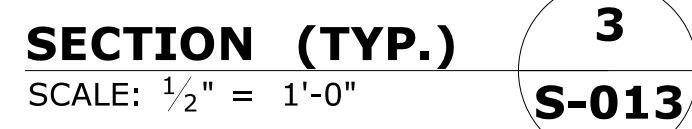
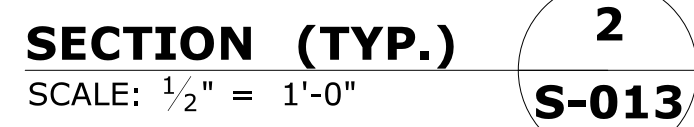
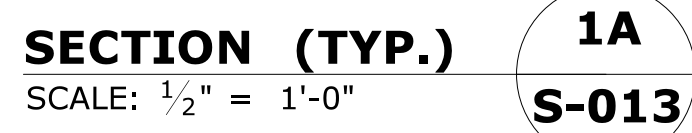
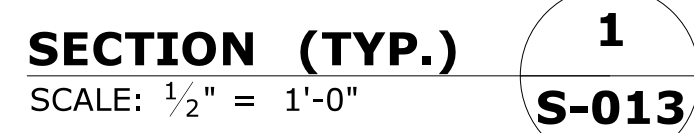
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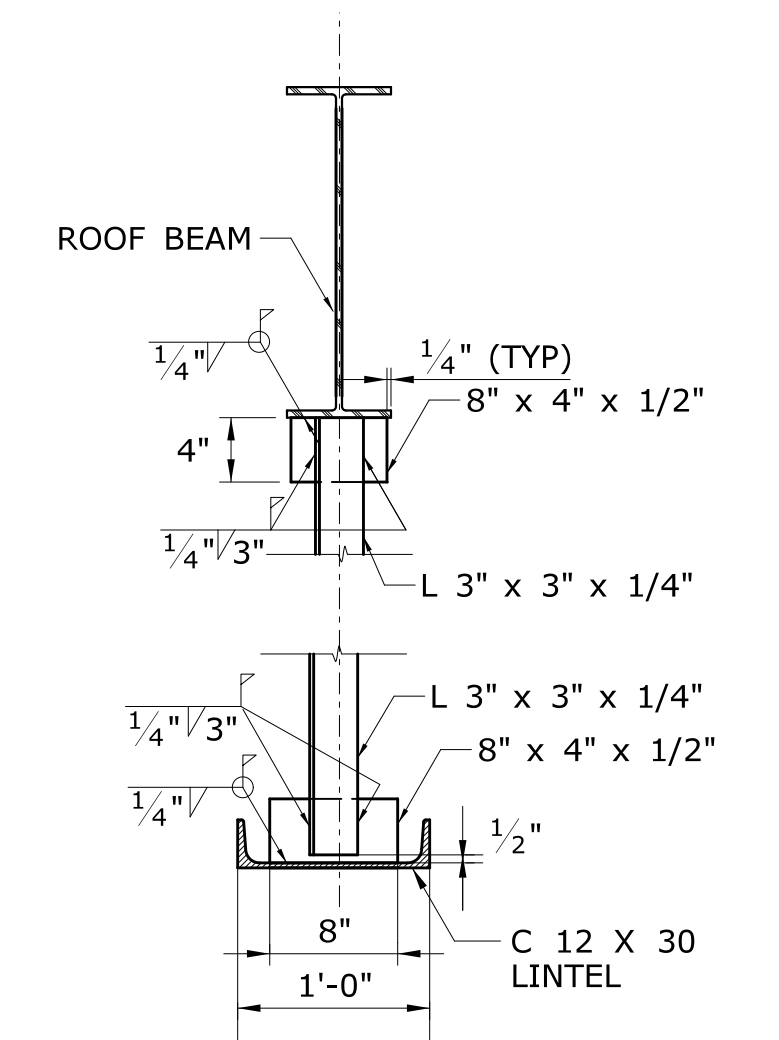




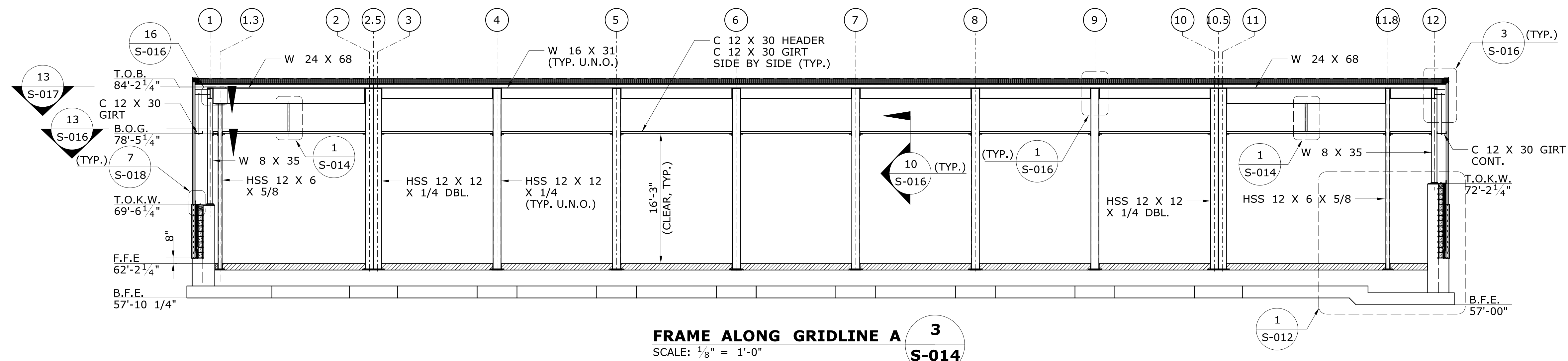


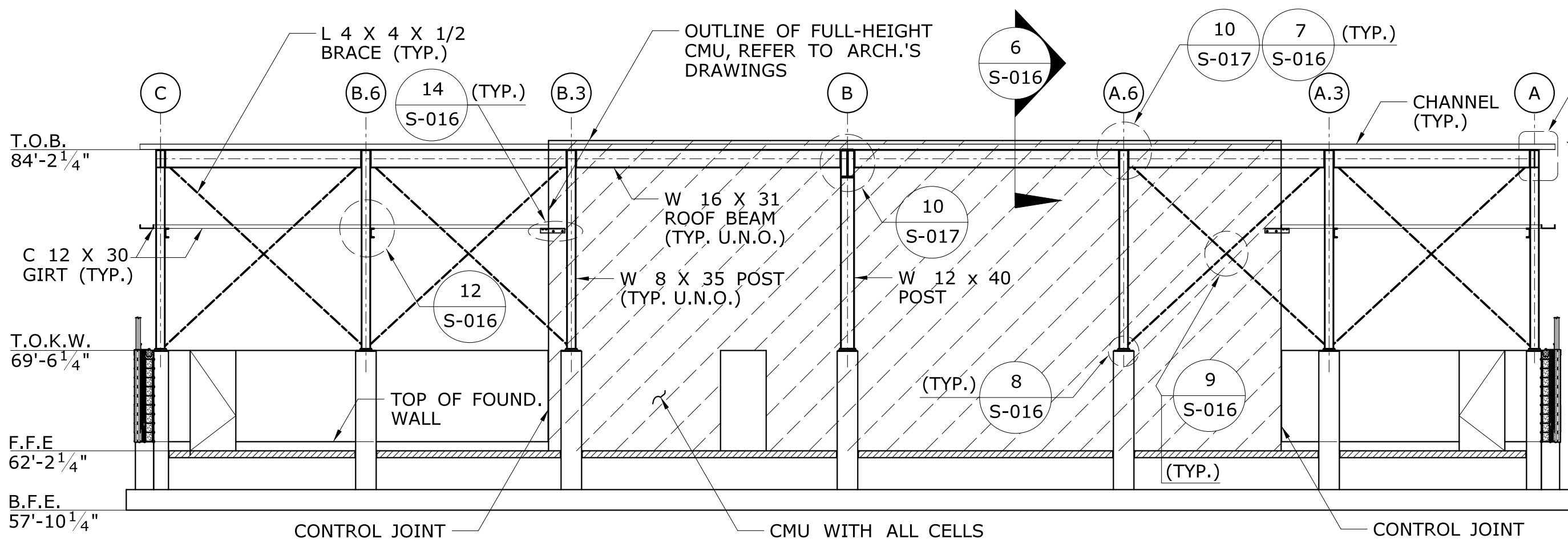


-	-	-	-	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: <b>DCS</b>	 <b>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</b>	SIGNATURE/ BLOCK:	PROJECT TITLE:	TOWN:  <b>OCCUM</b>	PROJECT NO. <b>103-247</b>		
-	-	-	-		CHECKED BY: <b>RPL</b>		APPROVED BY:			DRAWING TITLE:	DRAWING NO. <b>S-013</b>	
-	-	-	-		<b>SCALE AS NOTED</b>		 File name: ...\\FD_MST_STR_0103.0247_S013.dgn			<b>OCCUM MAINTENANCE FACILITY</b>	<b>FOUNDATION DETAILS-5</b>	SHEET NO. <b>06.13</b>
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 6/11/2015								

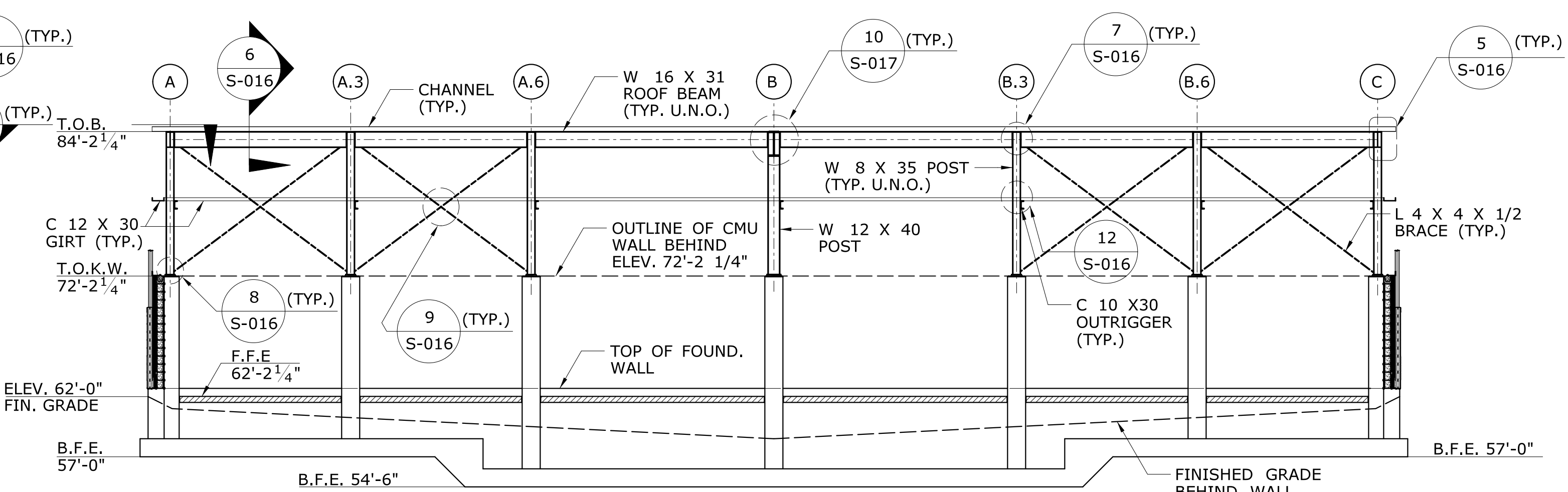


**LINTEL HANGER (TYP.)**  
SCALE: 1" = 1'-0"

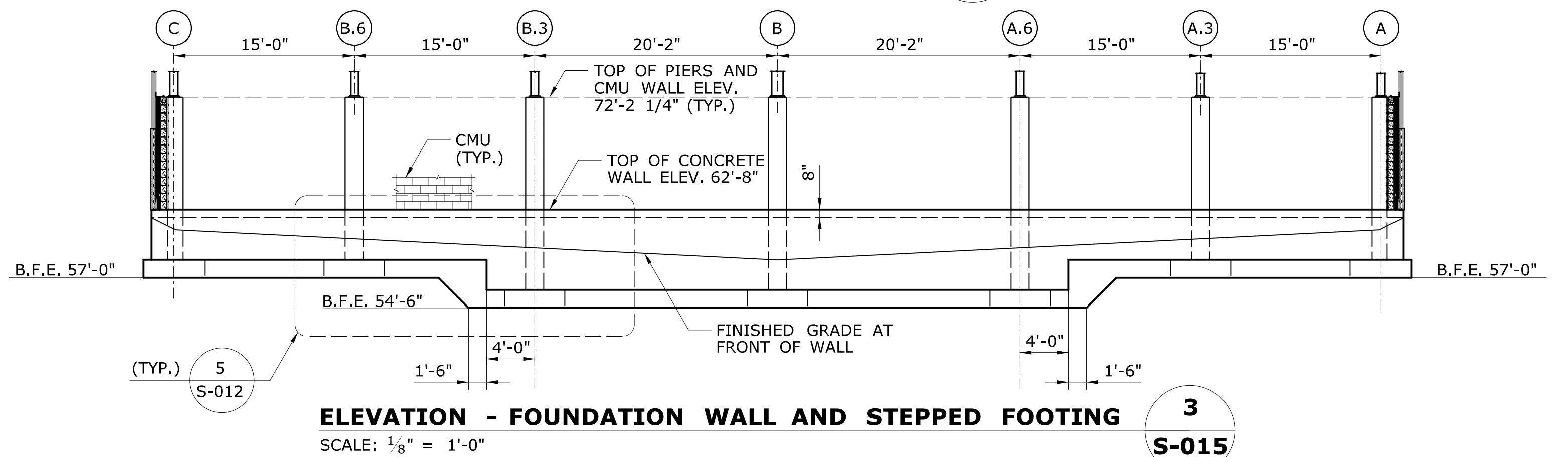
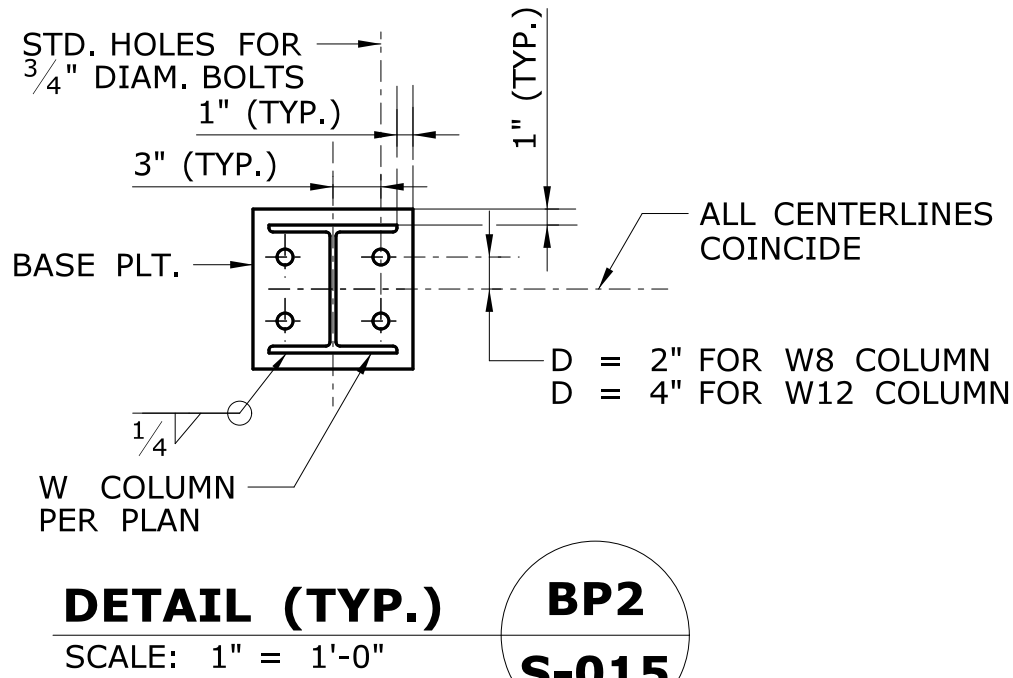
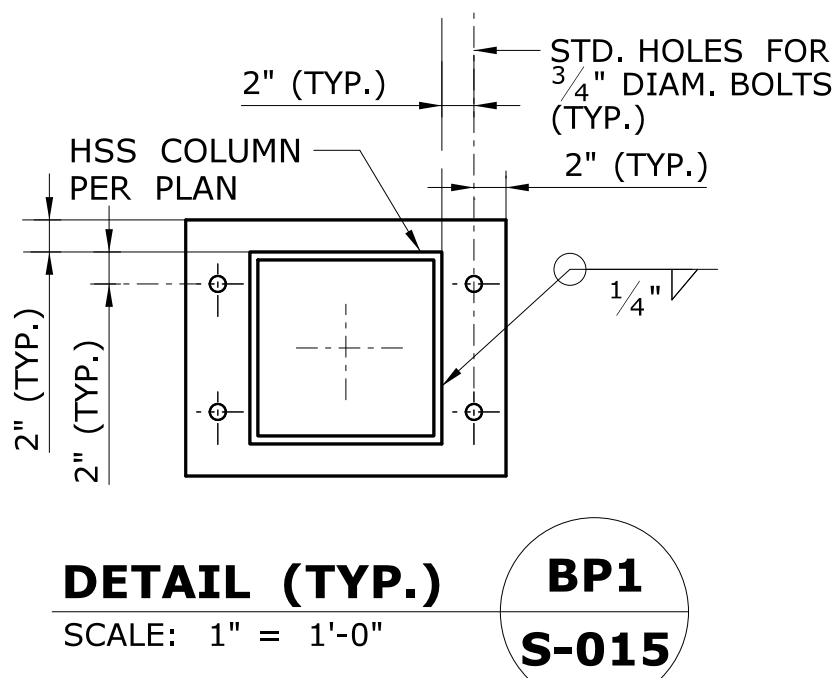
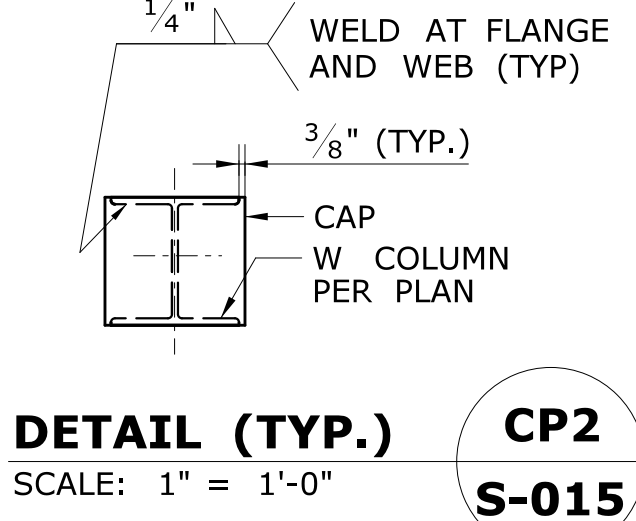
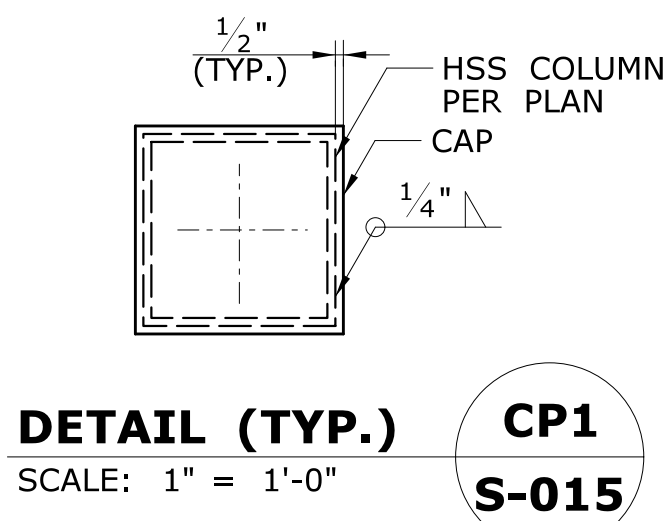
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**FRAME ALONG GRIDLINE 1**  
SCALE: 1/8" = 1'-0"



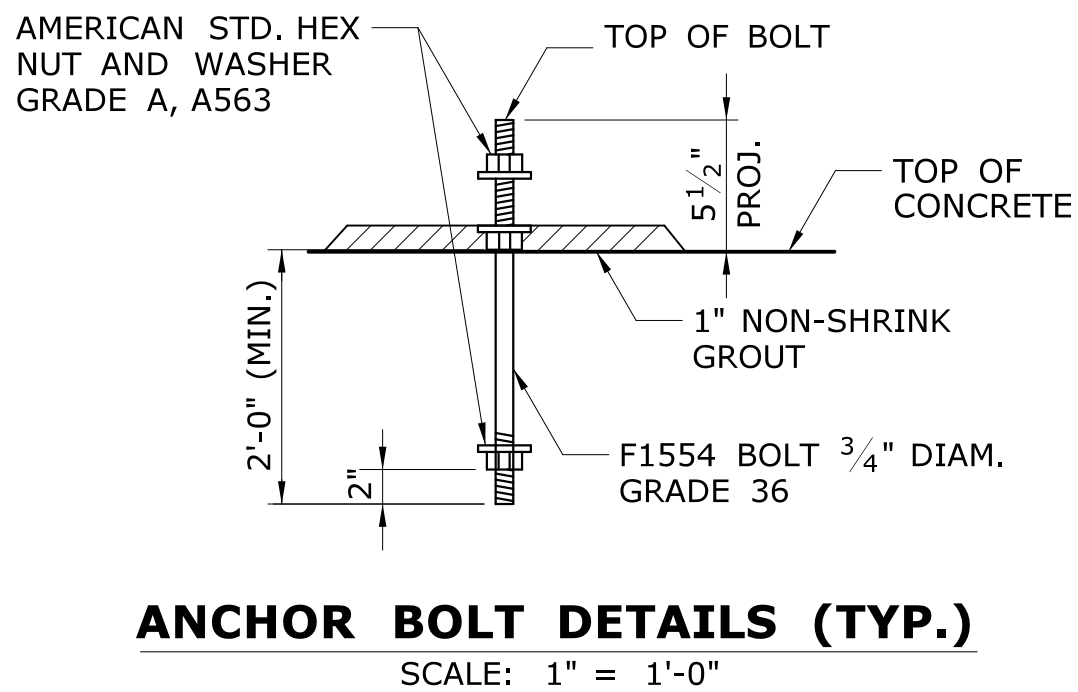
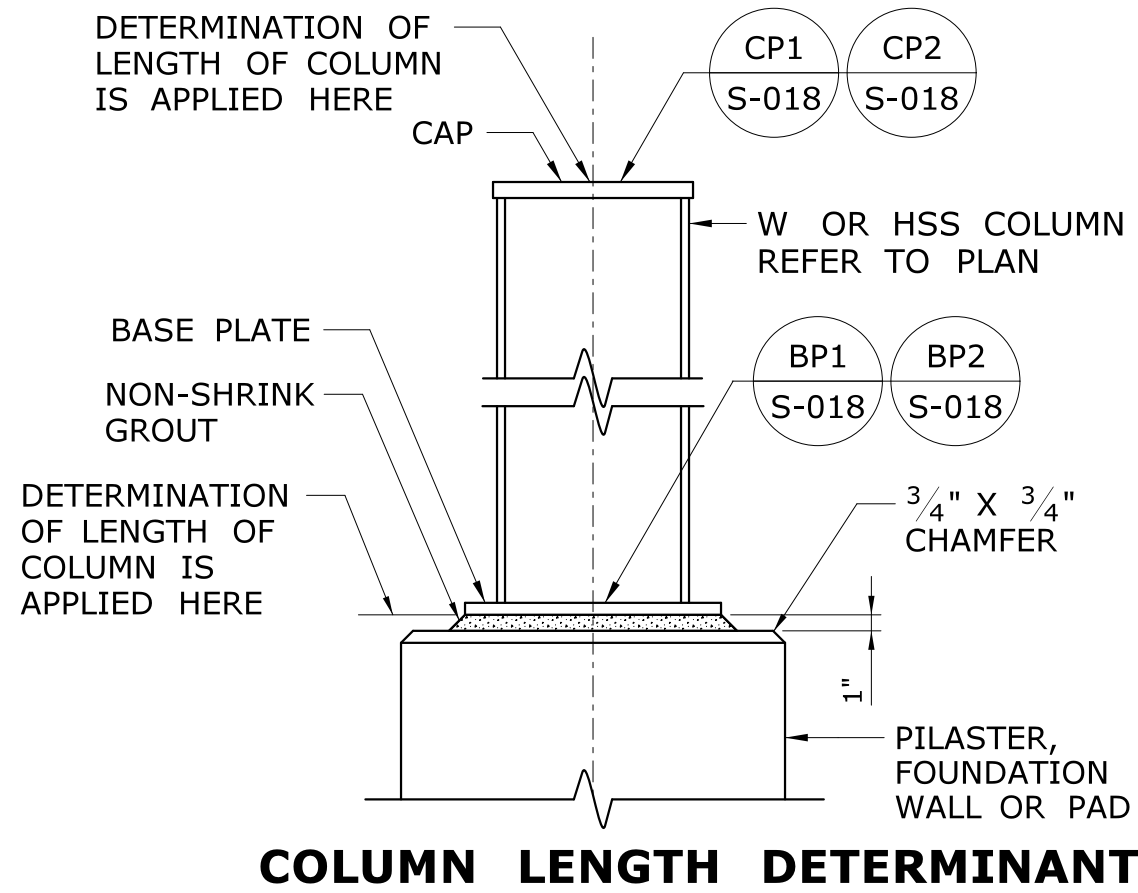
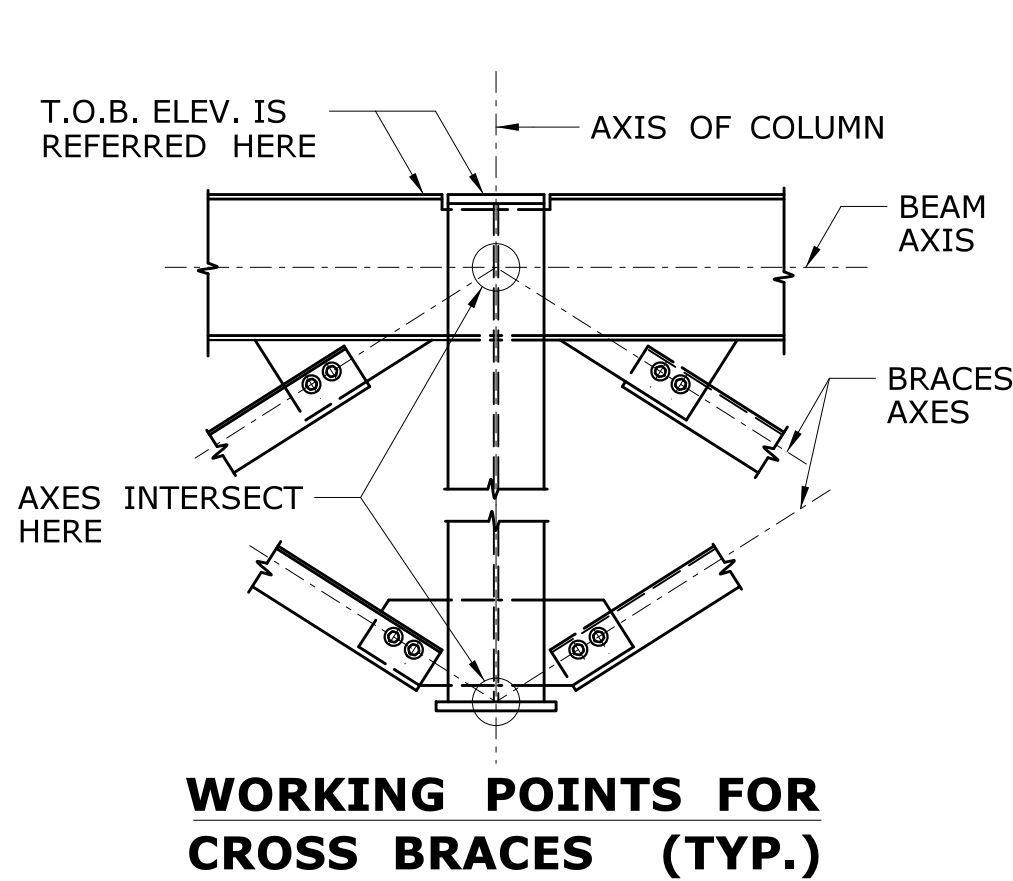
**FRAME ALONG GRIDLINE 12**  
SCALE: 1/8" = 1'-0"



COLUMN SCHEDULE						
COLUMN GRIDLINE DESIGNATION	COLUMN TYPE	COLUMN LENGTH*	BASE PLATE SIZE	BOTTOM OF BASE PLATE ELEVATION**	CAP PLATE SIZE	TOP OF COLUMN INCLUDING CAP PLATE
A/2, A/3, A/4, A/5, A/6, A/7, A/8, A/9, A/10, A/11, C/2, C/3, C/4, C/5, C/6, C/7, C/8, C/9, C/10, C/11	HSS 12 X 12 X 1/4"	22' - 9"	PL 20 X 16 X 3/4"	61'-5 1/4"	PL 13 X 13 X 3/4"	84'-2 1/4"
A/11.8, C/11.8	HSS 12 X 6 X 5/8"	22' - 9"	PL 20 X 16 X 3/4"	61'-5 1/4"	PL 13 X 13 X 3/4"	84'-2 1/4"
A/1.3, C/1.3	HSS 12 X 6 X 5/8"	20'- 9 1/4"	PL 20 X 16 X 3/4"	61'-5 1/4"	PL 13 X 13 X 3/4"	82'-2 1/2"
A/1, A.3/1, A.6/1, B.3/1, B.6/1, C/1	W 8 X 35	14'-7"	PL 10.12 X 10 X 3/4"	69'-7 1/4"	PL 8.75 X 8.75 X 3/4"	84'-2 1/4"
A/12, A.3/12, A.6/12, B.3/12, B.6/12, C/12	W 8 X 35	11'-11"	PL 10.12 X 10 X 3/4"	72'-3 1/4"	PL 8.75 X 8.75 X 3/4"	84'-2 1/4"
B/1, B.2.5, B/4, B/5, B/6, B/7, B/8, B/9	W 12 X 40	14'-7"	PL 14 X 10 X 3/4"	69'-7 1/4"	PL 12 X 8.75 X 3/4"	84'-2 1/4"
B/10.5	W 12 X 40	21'-11"	PL 14 X 10 X 3/4"	62'-3 1/4"	PL 12 X 8.75 X 3/4"	84'-2 1/4"
B/12	W 12 X 40	11'-11"	PL 14 X 10 X 3/4"	72'-3 1/4"	PL 12 X 8.75 X 3/4"	84'-2 1/4"

\* COLUMN LENGTH INCLUDES BASE PLATE AND CAP PLATE THICKNESSES, WHERE APPLICABLE. CONTRACTOR SHALL VERIFY ALL COLUMN LENGTHS PRIOR TO FABRICATION.

\*\* THIS ELEVATION CORRESPONDS TO THE TOP OF THE 1-INCH THICK NON-SHRINK GROUT AND IS GIVEN AGAINST THE TOP OF SLAB.



**ABBREVIATIONS:**  
T.O.B. - TOP OF STEEL  
T.O.P. - TOP OF PIER  
T.O.K.W. - TOP OF KNEE WALL  
F.F.E. - FINISHED FLOOR ELEVATION  
B.F.E. - BOTTOM OF FOOTING ELEVATION

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/11/2015

DESIGNER/DRAFTER:  
**DCS**  
CHECKED BY:  
**RPL**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
**DEPARTMENT OF TRANSPORTATION**  
Filename: ...\\FD\_MST\_STR\_0103\_0247\_S015.dgn

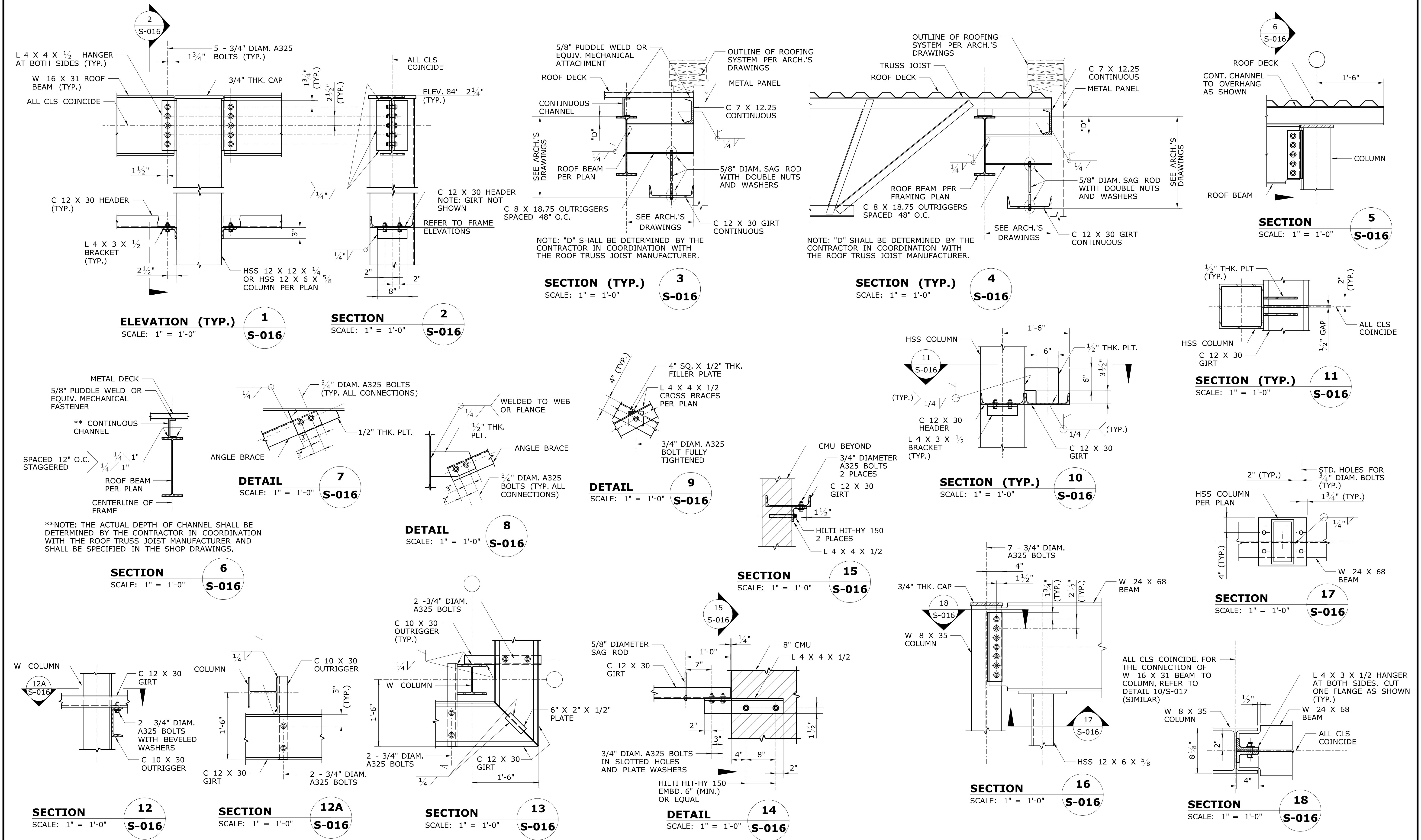
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**OFFICE OF ENGINEERING**  
APPROVED BY:  
*[Signature]*




PROJECT TITLE:  
**OCCUM MAINTENANCE FACILITY**

TOWN:  
**OCCUM**  
DRAWING TITLE:  
**FRAME ELEVATION-2**

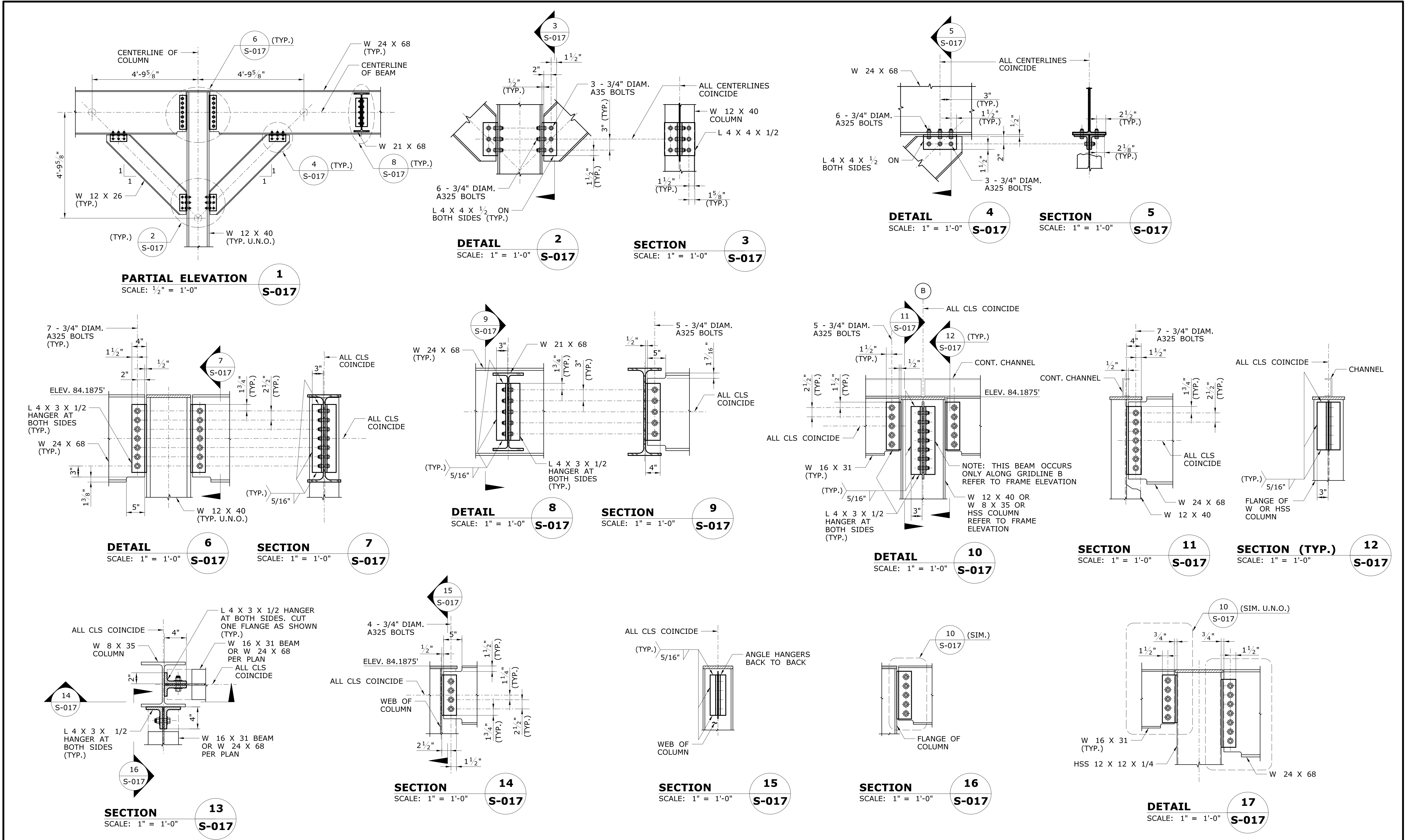
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DRAWING NO.  
**S-015**  
SHEET NO.  
**06.15**


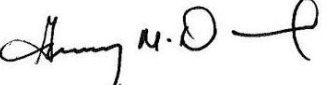




-	-	-	-	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: <b>DCS</b> CHECKED BY: <b>RPL</b>  SCALE AS NOTED	 <b>STATE OF CONNECTICUT</b> <b>DEPARTMENT OF TRANSPORTATION</b>  Filename: ...\\FD_MST_STR_0103_0247_S016.dgn	 <b>OFFICE OF ENGINEERING</b>  APPROVED BY: 	PROJECT TITLE:  <b>OCCUM MAINTENANCE FACILITY</b>	TOWN:  <b>OCCUM</b>	PROJECT NO. <b>103-247</b>
REV.	DATE	REVISION	DESCRIPTION	SHEET NO.	Plotted Date: 6/11/2015				DRAWING TITLE:  <b>STEEL DETAILS</b>	DRAWING NO. <b>S-016</b>
										SHEET NO. <b>06.16</b>



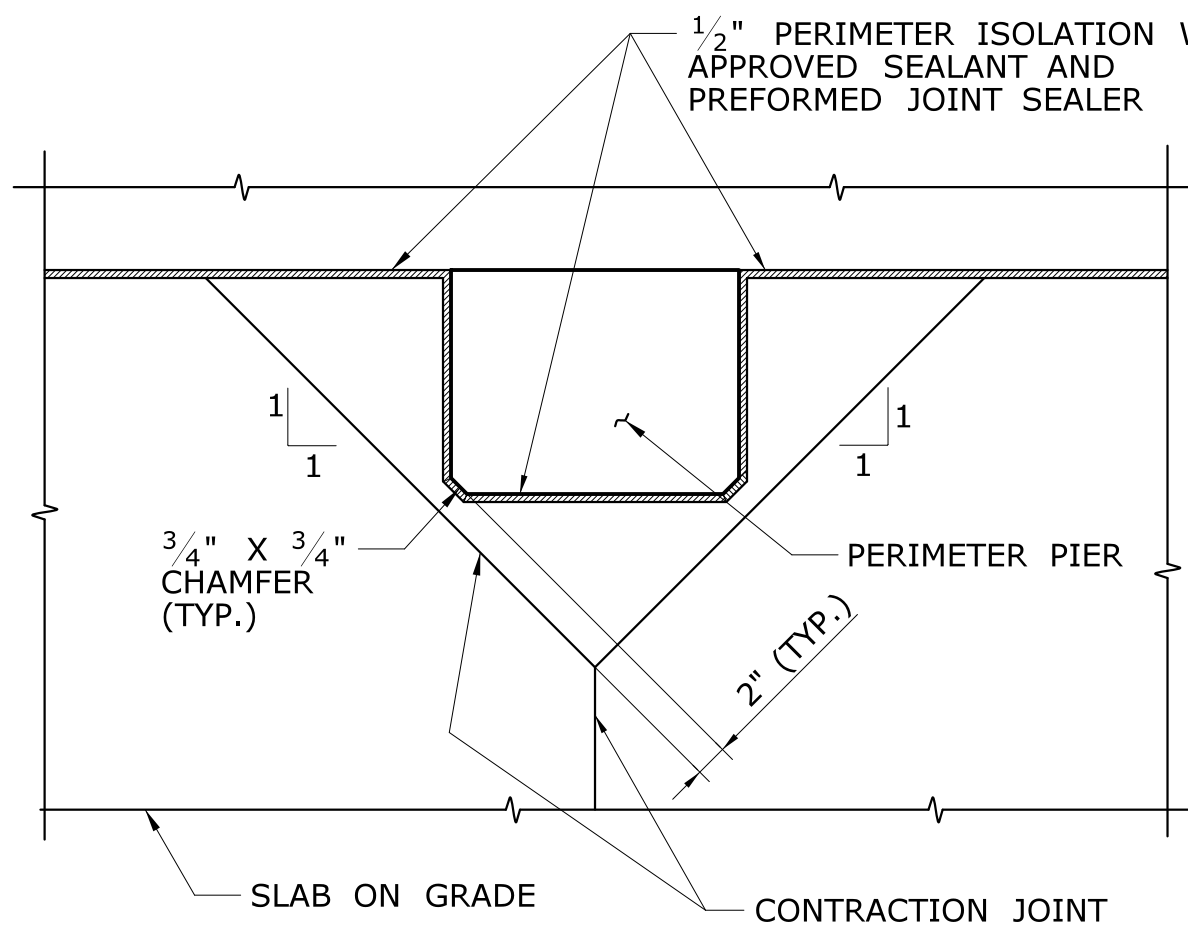


REV. DATE		REVISION DESCRIPTION	SHEET NO.	Plotted Date: 6/11/2015	DESIGNER/DRAFTER: <b>DCS</b> CHECKED BY: <b>RPL</b> SCALE AS NOTED	 <b>STATE OF CONNECTICUT</b> <b>DEPARTMENT OF TRANSPORTATION</b> Filename: ...\\FD_MST_STR_0103_0247_S017.dgn	SIGNATURE/ BLOCK: <b>OFFICE OF ENGINEERING</b> APPROVED BY: 	PROJECT TITLE: <b>OCCUM MAINTENANCE FACILITY</b>	TOWN: <b>OCCUM</b>	PROJECT NO. <b>103-247</b> DRAWING NO. <b>S-017</b> SHEET NO. <b>06.17</b>
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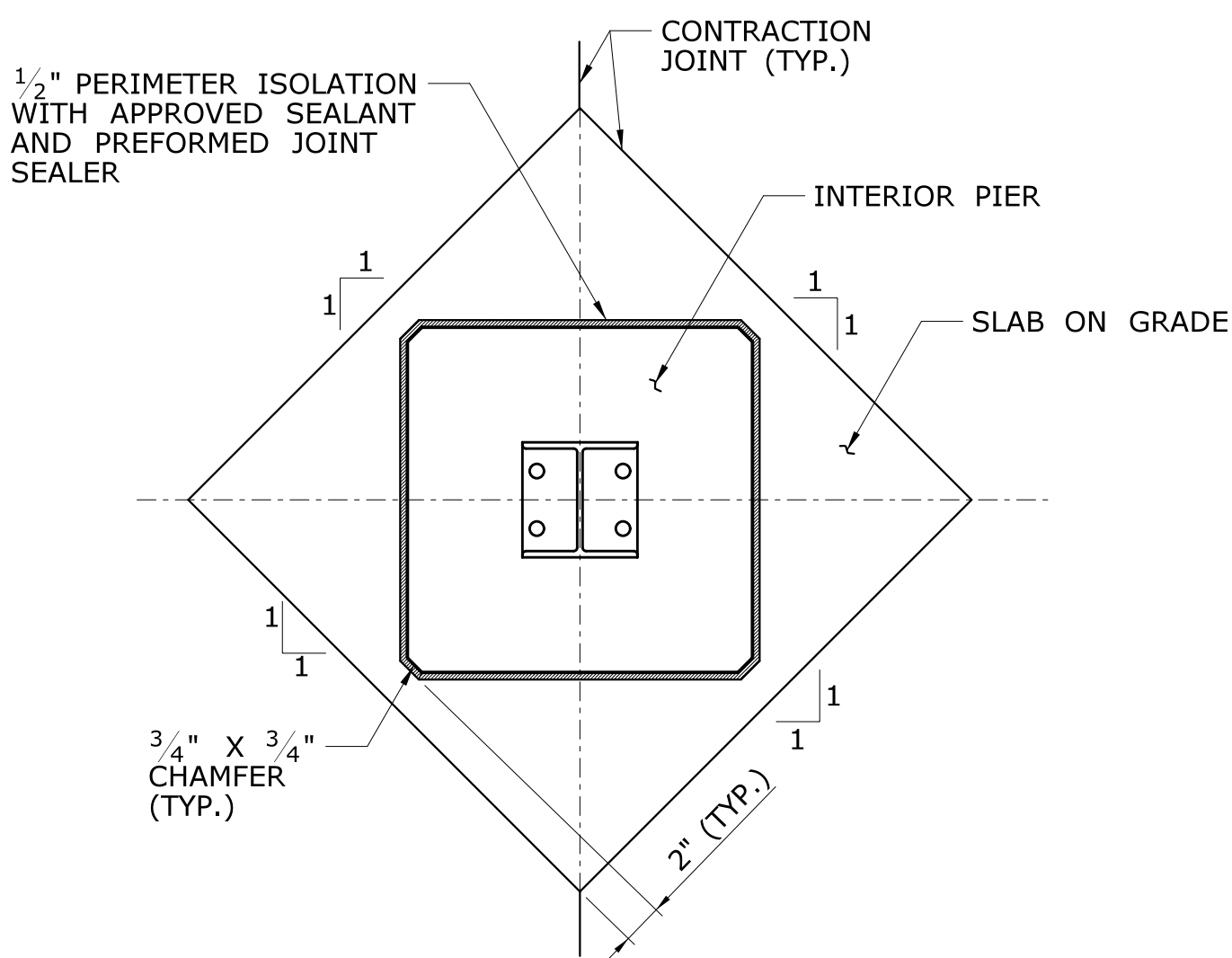


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DRAWING NO.	<b>S-019</b>
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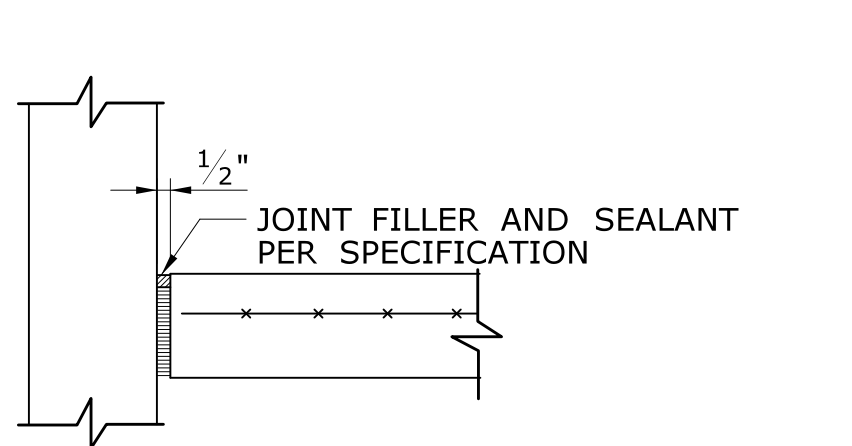




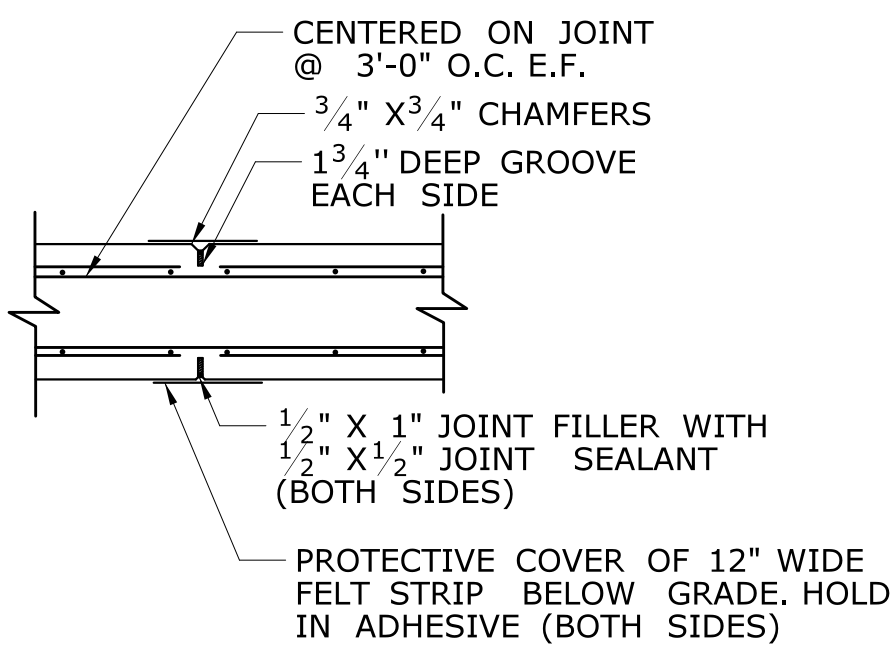
ISOLATION JOINT AT PERIMETER PIERS



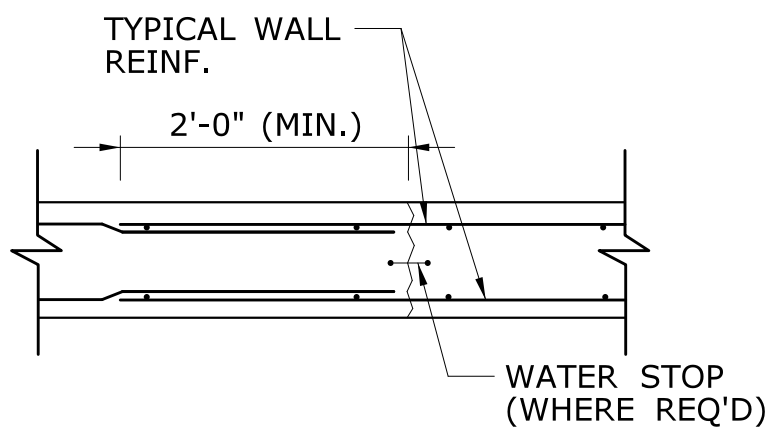
ISOLATION JOINT AT INTERIOR PIERS



SLAB ON GRADE ISOLATION JOINT



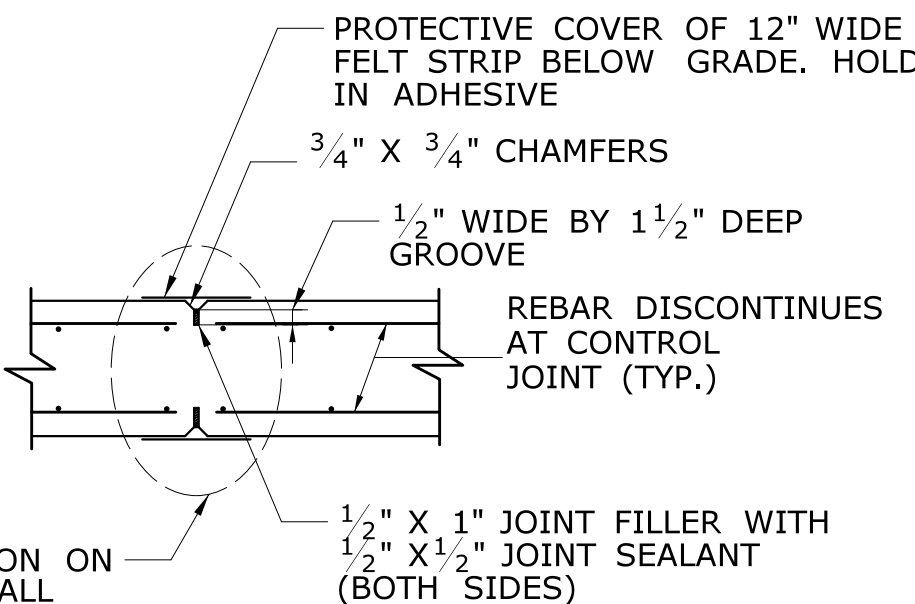
WALL CONTROL JOINT



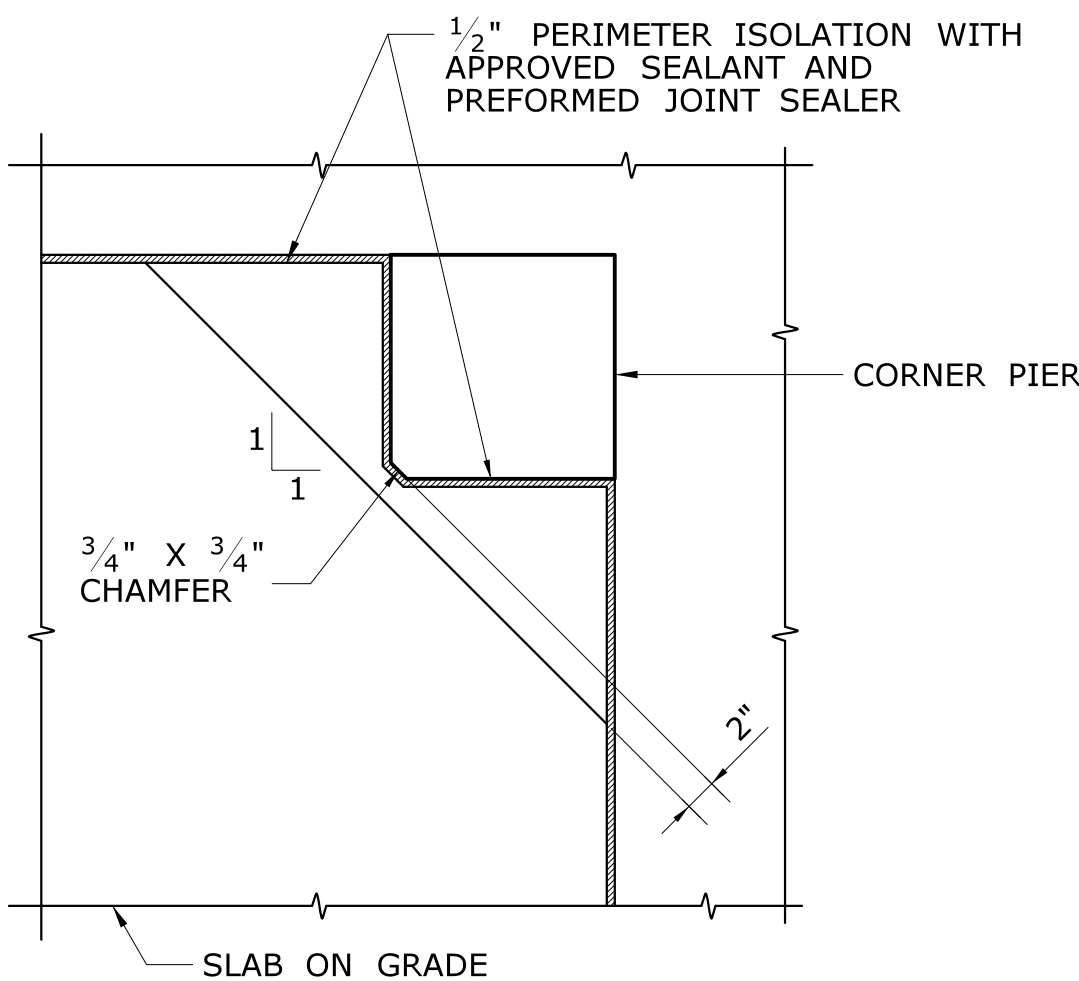
NOTES:

- 1) CONSTRUCTION JOINT SHALL BE 1'-0" (MIN.) FROM ANY CORNER
- 2) REINFORCING SHALL EXTEND 2'-0" (MIN.) BEYOND JOINT.
- 3) CONSTRUCTION JOINT LOCATION TO BE DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER.

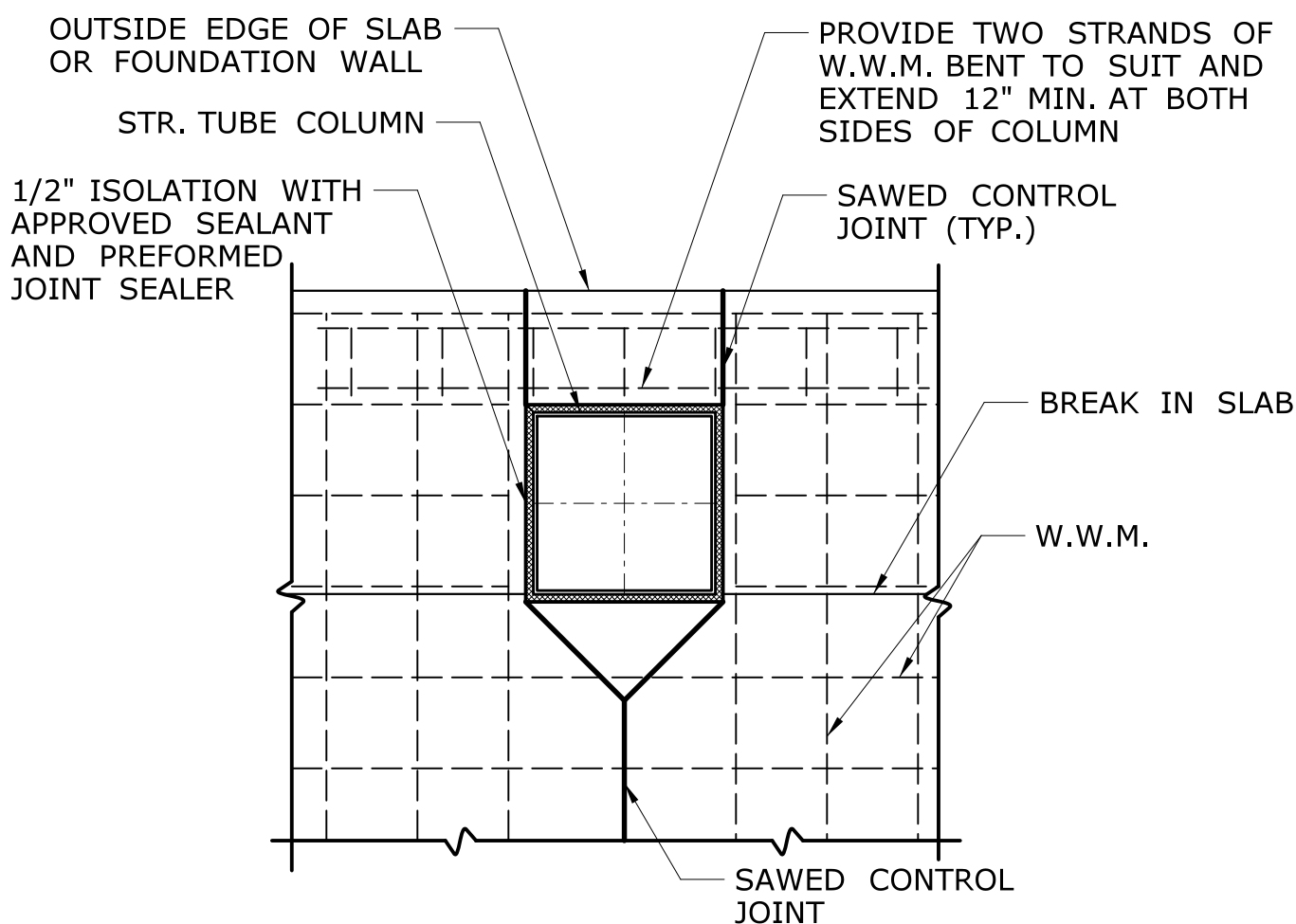
WALL CONSTRUCTION JOINT



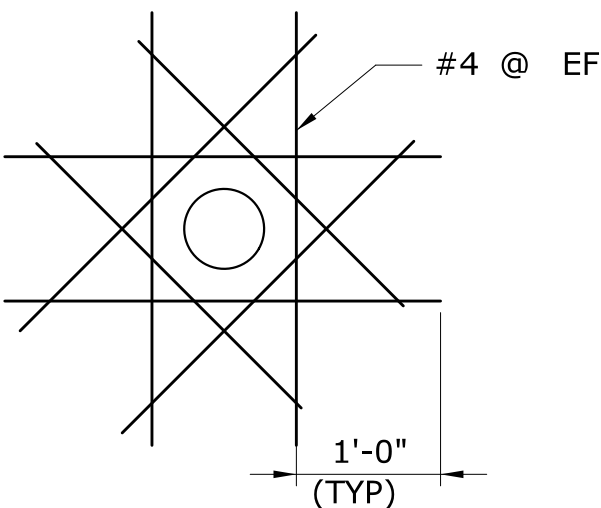
FOUNDATION WALL CONTROL JOINT  
AT BUILDING EXPANSION JOINT



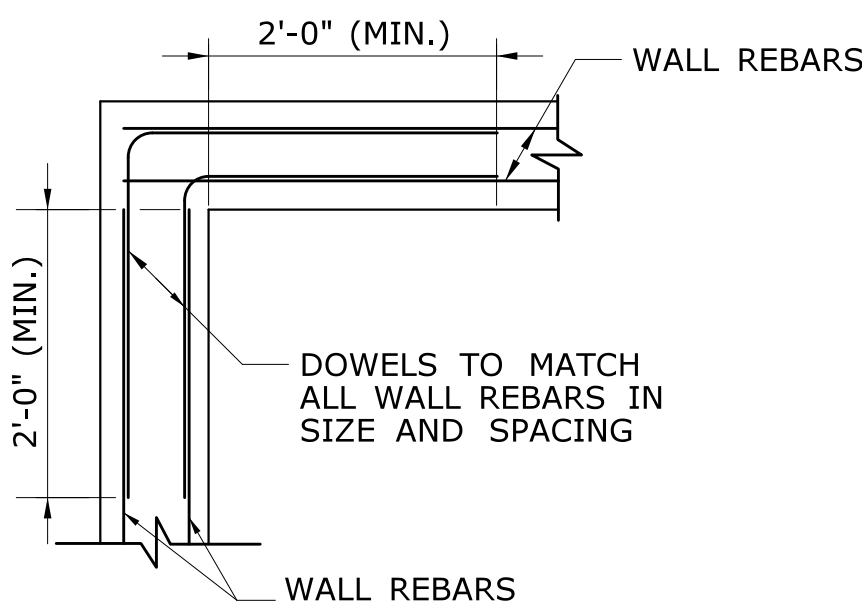
ISOLATION JOINT AT CORNER PIERS



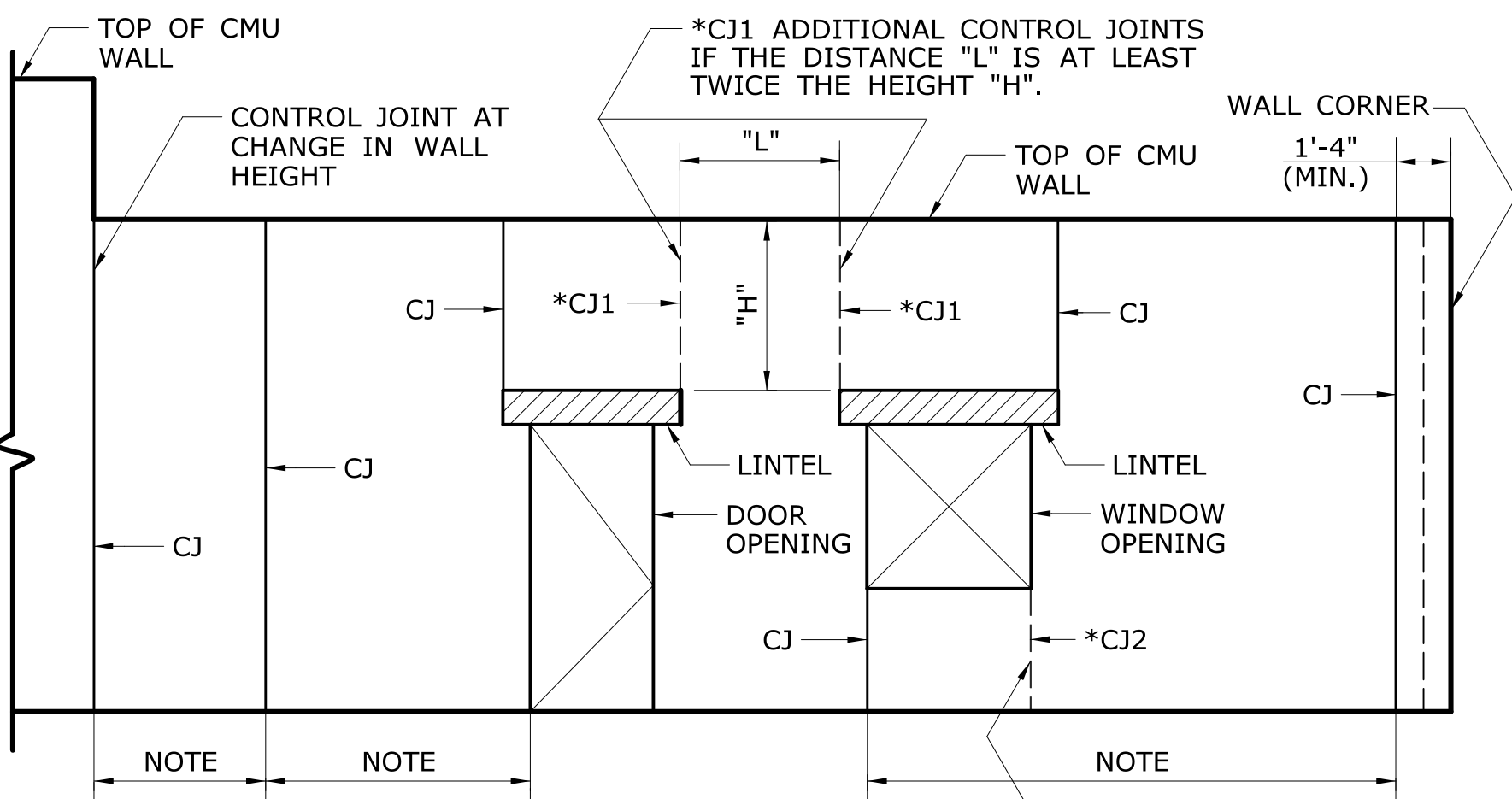
ISOLATION JOINT AT STR. TUBE COLUMN



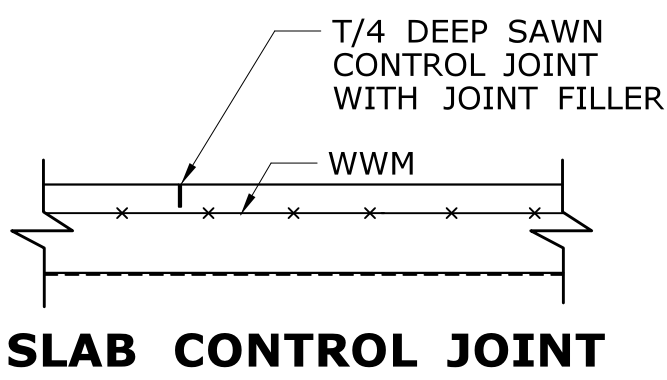
ADDITIONAL REBARS AT PENETRATIONS



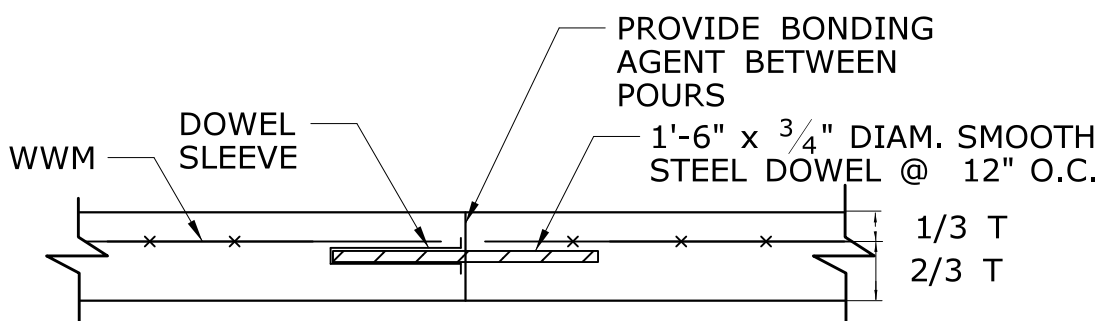
REBARS AT WALL CORNERS



TYPICAL CONTROL JOINT LOCATIONS IN CMU WALL



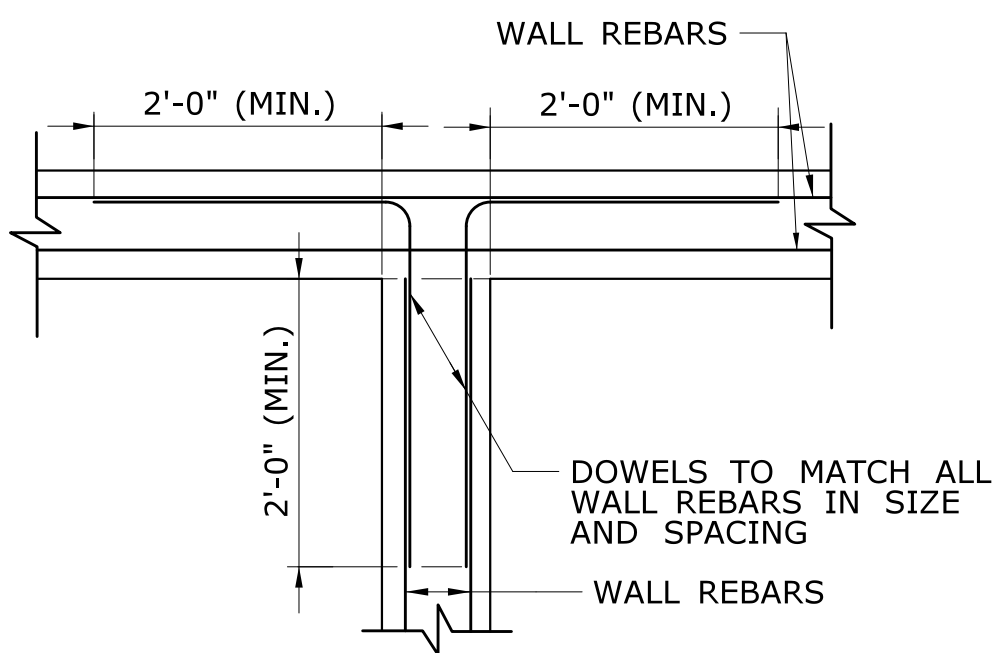
SLAB CONTROL JOINT



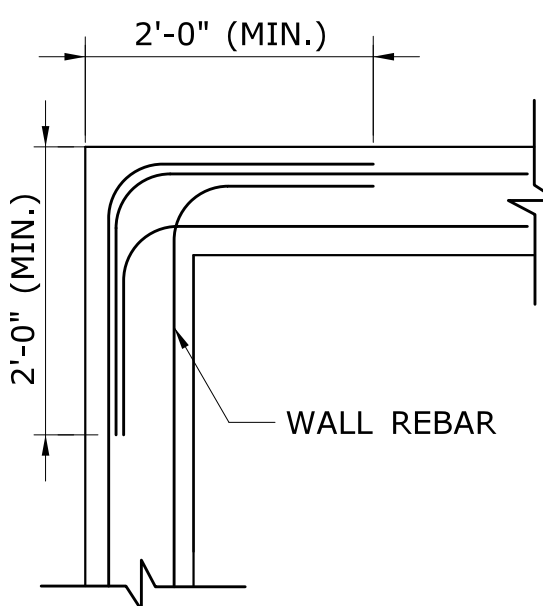
NOTES:

- 1) CONSTRUCTION JOINT SHALL BE FORMED FULL DEPTH OF SLAB.
- 2) DOWELS OR DOWEL SLEEVES SHALL BE INSTALLED AND SECURED AGAINST DISPLACEMENT PRIOR TO POUR. DOWELS SHALL NOT BE INSTALLED AFTER POUR.
- 3) DOWEL SLEEVES SHALL BE USED ON ONE SIDE OF JOINT WITH THE OTHER SIDE EXPOSED TO CONCRETE.

SLAB CONSTRUCTION JOINT (TYP.)



REBARS AT WALL INTERSECTIONS



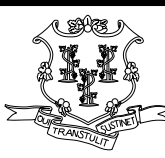
REBARS AT WALL CORNERS (ALTERNATE)

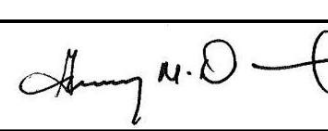
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/11/2015

DESIGNER/DRAFTER:  
**DCS**  
CHECKED BY:  
**RPL**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
**DEPARTMENT OF TRANSPORTATION**  
Filename: ...\\FD\_MST\_STR\_0103\_0247\_S020.dgn

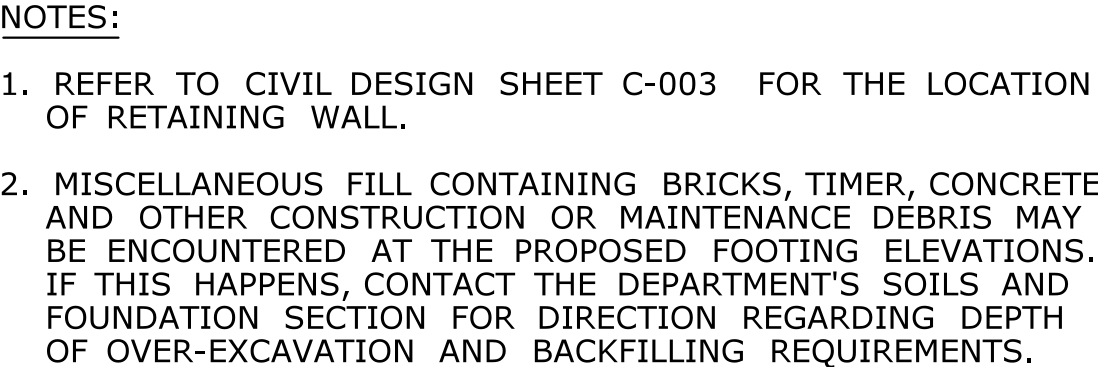
SIGNATURE/  
BLOCK:  
**OFFICE OF ENGINEERING**  
APPROVED BY:  


PROJECT TITLE:  
**OCCUM  
MAINTENANCE  
FACILITY**

TOWN:  
**OCCUM**  
DRAWING TITLE:  
**MISC. TYPICAL CONCRETE  
DETAILS**

PROJECT NO.  
**103-247**  
DRAWING NO.  
**S-020**  
SHEET NO.  
**06.20**





Technical drawing of a retaining wall cross-section. The wall is 7'-0" wide at the base, composed of three sections: 2'-6" on the left, 1'-3" in the center, and 3'-3" on the right. The wall height is indicated as "VARIES" on the left. The top of the wall has a 1" x 1" bevel (typical). The top of the finished grade is shown on the left. The wall is constructed with a 12" topsoil over pervious structure backfill. The slope line is shown except where undisturbed rocks obtrude within this area. The wall is damped to the level of finished grade. A 2" x 6" shear key is shown. A 6" diam. corrugated plastic drain pipe is sloped to outlet away from the wall, refer to civil design drawings. The base of the wall is on granular fill, which is 1'-0" thick. The wall is 1'-0" thick at the base. The wall is 1'-3" thick at the top. The wall is 2'-6" thick at the base. The wall is 3'-3" thick at the base. The wall is 7'-0" wide at the base.

Labels and dimensions:

- VARIES (vertical dimension on the left)
- 1" x 1" BEVEL (TYP.) (top left corner)
- 1'-3" (top horizontal dimension)
- 6" (top right corner dimension)
- TOP OF FINISHED GRADE (top left corner)
- 12" TOPSOIL OVER PVIOUS STRUCTURE BACKFILL (top right corner)
- SLOPE LINE EXCEPT WHERE UNDISTURBED ROCKS OBTRUDE WITHIN THIS AREA (middle right)
- DAMPPOOFING TO LEVEL OF FINISHED GRADE (middle right)
- 2" X 6" SHEAR KEY (middle right)
- 6" DIAM. CORRUGATED PLASTIC DRAIN PIPE SLOPED TO OUTLET AWAY FROM THE WALL, REFER TO CIVIL DESIGN DRAWINGS. (middle right)
- 1'-0" (bottom left corner dimension)
- 1'-0" (bottom right corner dimension)
- GRANULAR FILL (bottom right corner)
- 2'-6" (bottom left section width)
- 1'-3" (bottom middle section width)
- 3'-3" (bottom right section width)
- 7'-0" (total bottom width)

VARIES

1" x 1" BEVEL (TYP.)

1'-3"

TOP OF FINISHED GRADE

2'-0" MIN.

1'-0"

2'-0"

1'-0"

2'-0"

1'-3"

2'-9"

6'-0"

1'-0"

GRANULAR FILL

TOP OF FINISHED GRADE

12" TOPSOIL OVER PVIOUS STRUCTURE BACKFILL

PVIOUS STRUCTURE BACKFILL



SLOPE LINE EXCEPT WHERE UNDISTURBED ROCKS OBTRUDE WITHIN THIS AREA

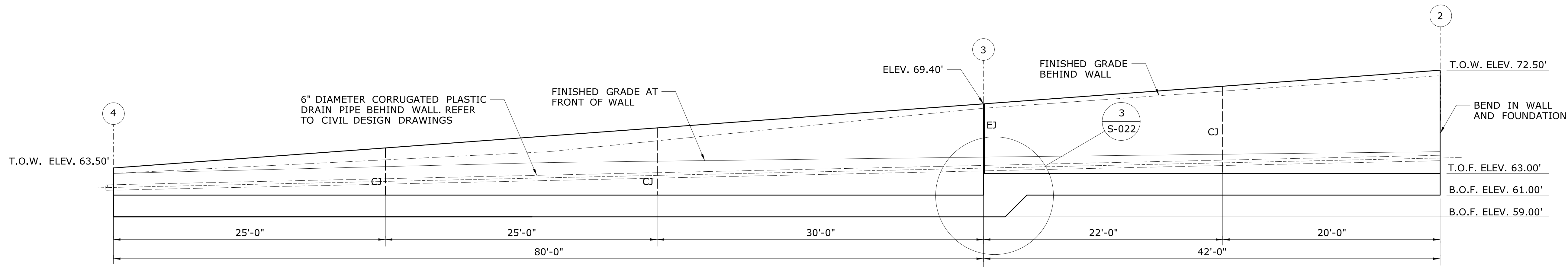
DAMPPROOFING TO LEVEL OF FINISHED GRADE

2" X 6" SHEAR KEY

6" DIAM. CORRUGATED PLASTIC DRAIN PIPE SLOPED TO OUTLET AWAY FROM THE WALL, REFER TO CIVIL DESIGN DRAWINGS.

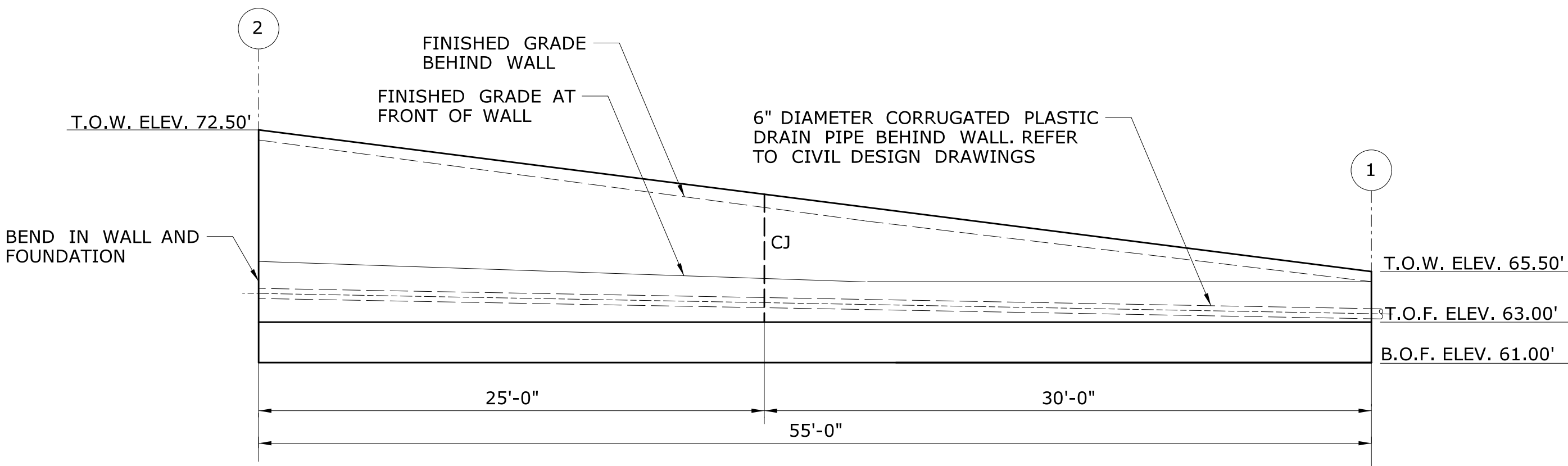
**SECTION** **2**  
SCALE: 1/2" = 1'-0" **S-021**

		-	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: <b>EWP</b>	 <b>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</b>	SIGNATURE/ BLOCK:	PROJECT TITLE:  <b>OCCUM MAINTENANCE FACILITY</b>	TOWN:  <b>OCCUM</b>	PROJECT NO. <b>103-247</b>	
-	-	-		CHECKED BY: <b>RPL</b>		<b>OFFICE OF ENGINEERING</b>		APPROVED BY: 	<b>DRAWING TITLE: RETAINING WALL-1</b>	DRAWING NO. <b>S-021</b>
-	-	-		SCALE AS NOTED						SHEET NO. <b>06.21</b>
-	-	-								
-	-	-								
REV.	DATE	REVISION DESCRIPTION		SHEET NO.		Plotted Date: 6/11/2015		Filename: ...\\FD_MST_STR_0103_0247_S021.dgn		

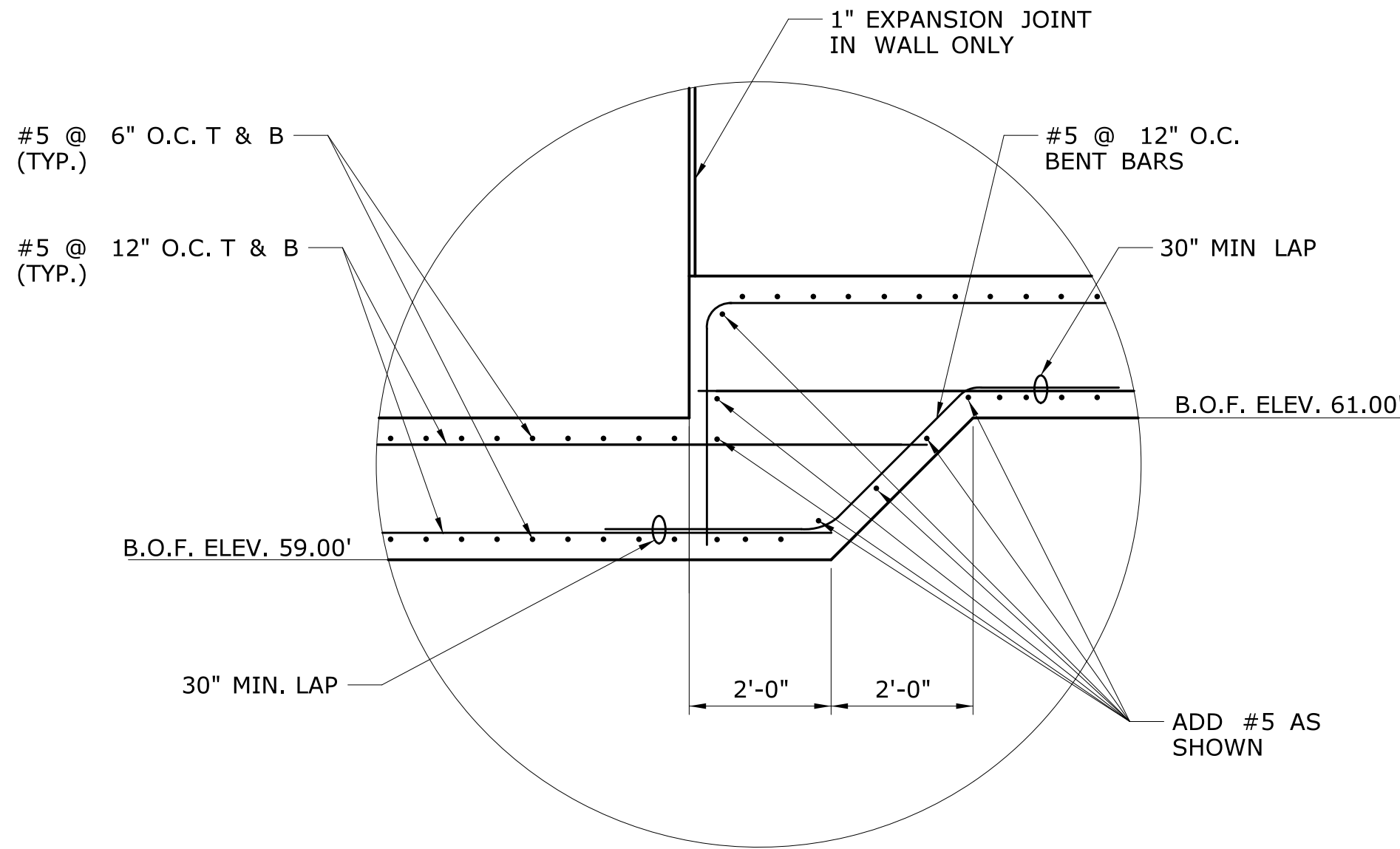


CJ = CONTRACTION JOINT  
EJ = EXPANSION JOINT

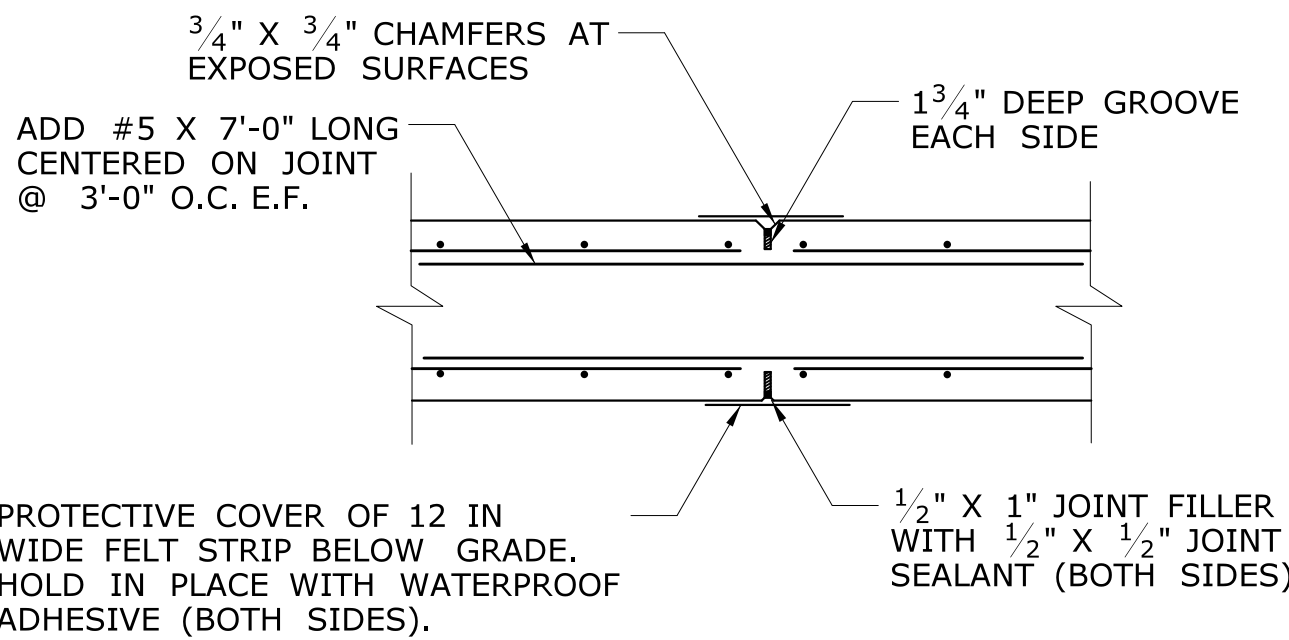
**ELEVATION PERPENDICULAR TO WALL**  
SCALE:  $\frac{3}{16}$ " = 1'-0"  
**2**  
**S-022**



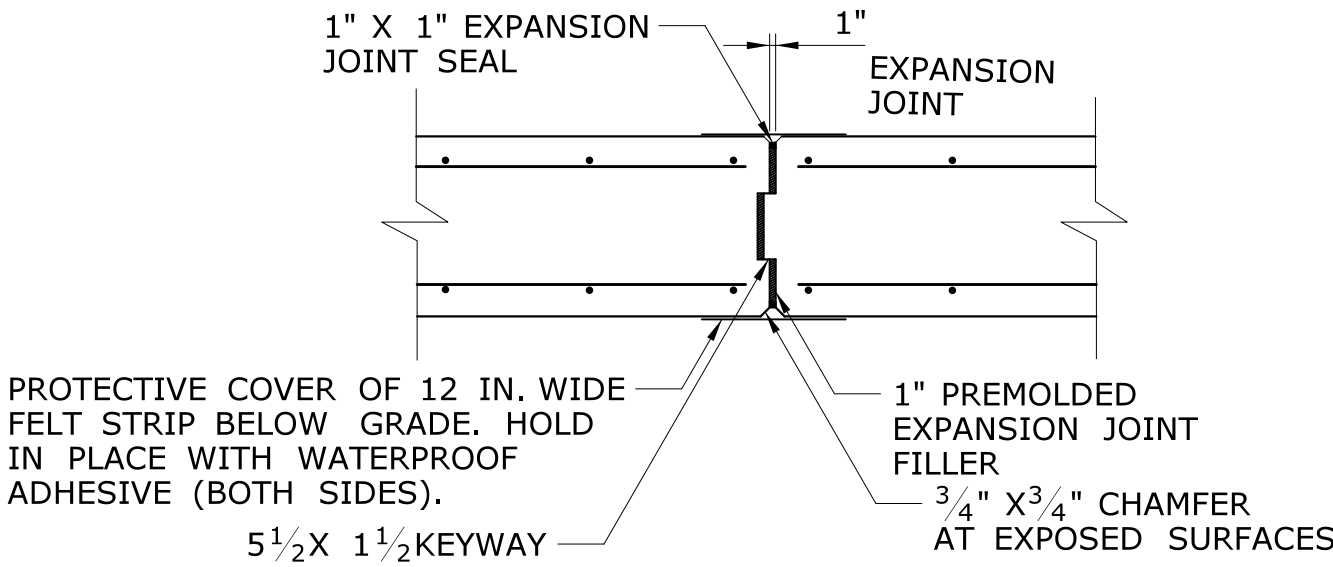
**ELEVATION PERPENDICULAR TO WALL**  
SCALE:  $\frac{3}{16}$ " = 1'-0"  
**1**  
**S-022**



**STEP DETAIL**  
SCALE:  $\frac{1}{2}$ " = 1'-0"  
**3**  
**S-022**



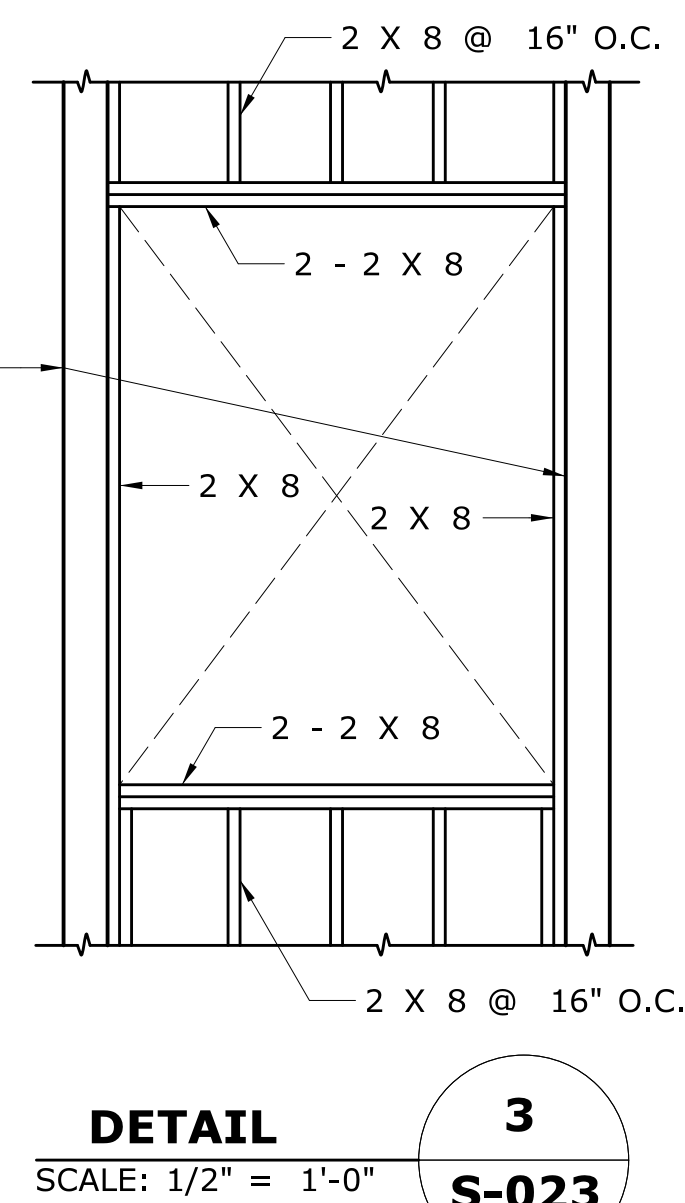
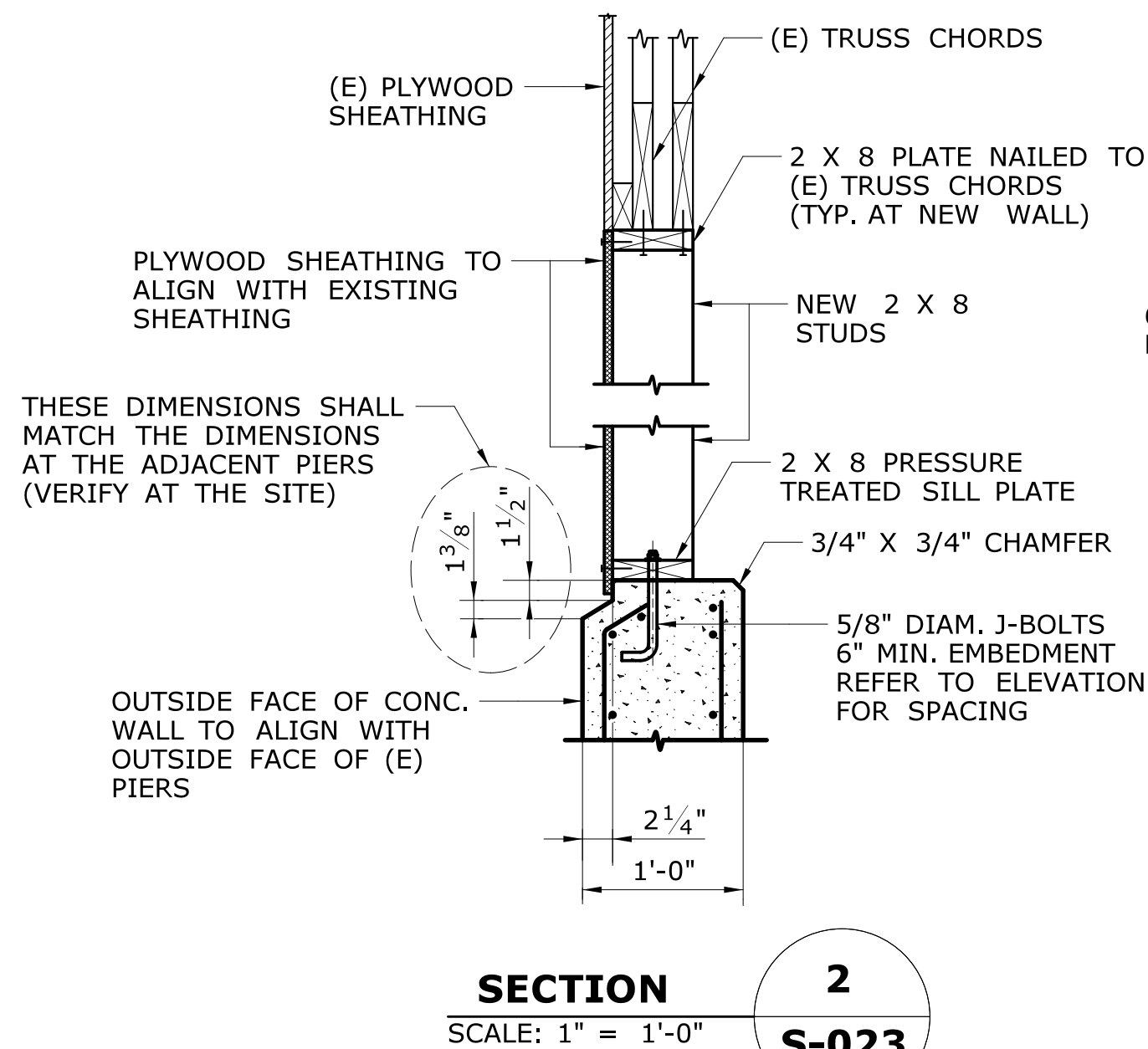
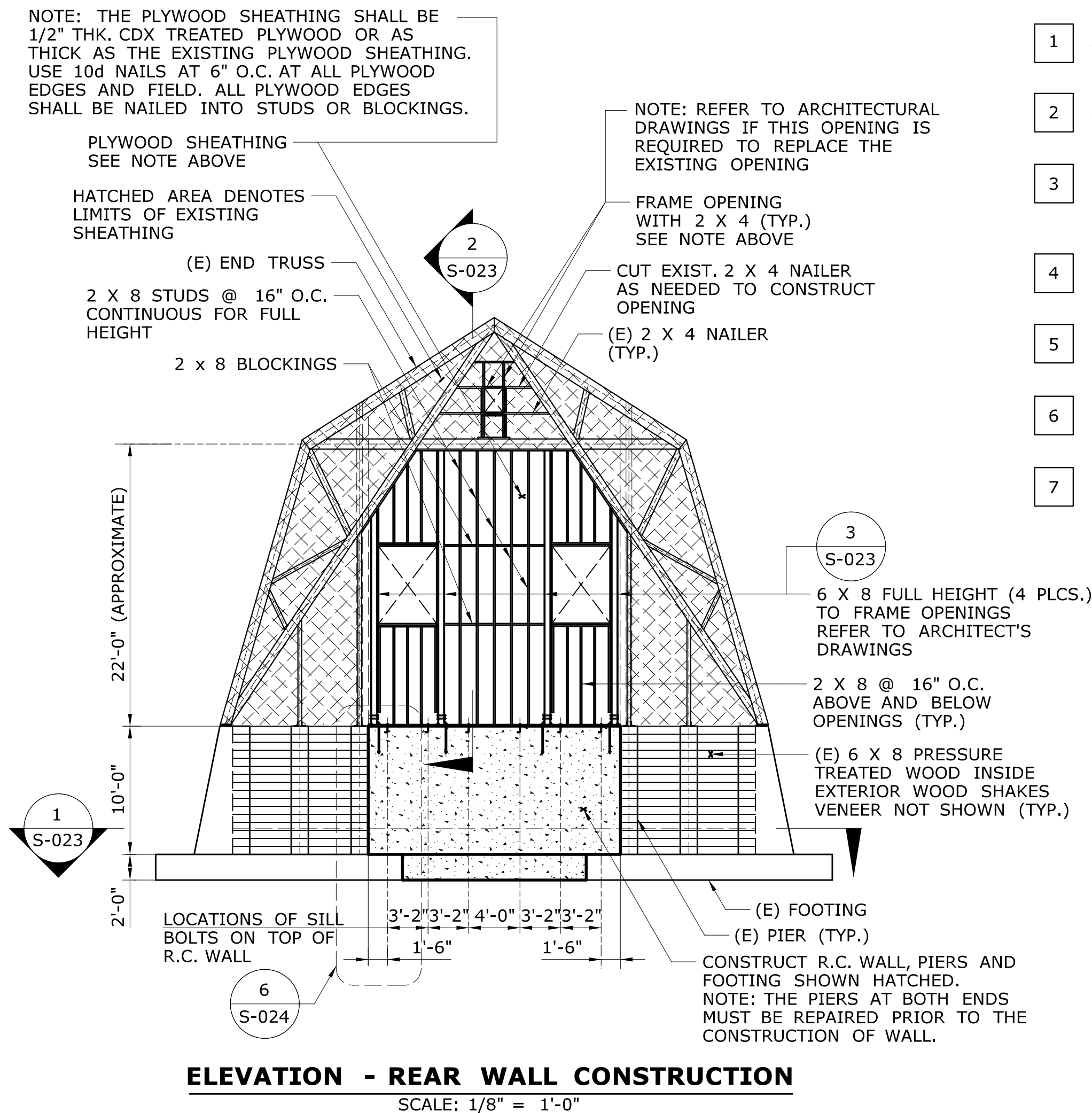
**CONTRACTION JOINT DETAIL (TYP.)**  
SCALE  $\frac{3}{4}$ " = 1'-0"



**EXPANSION JOINT DETAIL (TYP.)**  
SCALE  $\frac{3}{4}$ " = 1'-0"

- NOTES:
- JOINT SEAL SHALL BE PLACED VERTICALLY UP BOTH WALL FACES FROM THE TOP OF THE FOOTING AND HORIZONTALLY ACROSS THE TOP OF THE WALL
  - REINFORCEMENT SHALL NOT PASS THROUGH EXPANSION JOINT.

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- \*\*LEGEND - REPAIR OF CONCRETE PIERS**
- |   |   |
|---|---|
| 1 | SEVERE CRACKS AND SPALLING EXTENDING APPROXIMATELY 36" VERTICALLY AT BOTTOM FRONT AND SIDES OF PIER, REBARS CORRODED, CUT AND EXPOSED. REPAIR PER ITEM #060107A.              |
| 2 | SEVERE CRACKS AND SPALLING EXTENDING APPROXIMATELY 48" VERTICALLY AT BOTTOM FRONT AND LEFT SIDE OF PIER, REBARS CORRODED AND EXPOSED. REPAIR PER ITEM #060107A.               |
| 3 | RANDOM CRACKS 1/4" WIDE AT THE LEFT SIDE OF PIER APPROXIMATELY 24" LONG, AND AT TOP RIGHT CORNER AT THE RIGHT SIDE OF PIER APPROXIMATELY 10" LONG. REPAIR PER ITEM #0601196A. |
| 4 | RANDOM CRACKS AND SPALLING AT THE TOP 16" SEGMENT OF THE PIER AT THE LEFT SIDE AND EXTENDING AT THE FRONT. REPAIR PER ITEM #0601196A.   |
| 5 | RANDOM CRACKS EXTENDING APPROXIMATELY 18" AT THE BOTTOM RIGHT SIDE OF PIER. CONCRETE DETERIORATION AT EDGE OF PIER AT THIS SEGMENT. REPAIR PER ITEM #0601196A.                |
| 6 | RANDOM CRACKS 1/4" WIDE AT THE TOP AND BOTTOM, AT THE FRONT AND RIGHT SIDE OF THE PIER, APPROXIMATELY 30" LONG EACH. REPAIR PER ITEM #0601196A.                               |
| 7 | RANDOM CRACKS 1/4" WIDE AT THE TOP RIGHT AND LEFT SIDES OF PIER APPROXIMATELY 18" LONG EACH. REPAIR PER ITEM #0601196A.   |

- ### **\*\*LEGEND - REPAIR OF CONCRETE PIERS**
- |    |   |
|----|---|
| 8  | RANDOM CRACKS 1/4" WIDE AT THE TOP RIGHT AND LEFT SIDES OF PIER APPROXIMATELY 24" LONG. REPAIR PER ITEM #0601196A.  |
| 9  | RANDOM CRACKS 1/4" WIDE AND SPALLING OF CONCRETE AT THE TOP FRONT AND LEFT SIDE OF PIER APPROXIMATELY 60" LONG. REPAIR PER ITEM #0601196A.                          |
| 10 | RANDOM CRACKS 1/8" WIDE AT THE TOP FRONT AND LEFT SIDE OF PIER APPROXIMATELY 10" LONG EACH . REPAIR PER ITEM #0601196A.   |
| 11 | RANDOM CRACKS 1/4" WIDE AT THE TOP FRONT, AND RIGHT AND LEFT SIDES OF PIER APPROXIMATELY 48" LONG EACH. REPAIR PER ITEM #0601196A.                                  |
| 12 | RANDOM CRACKS 1/4" WIDE AT THE TOP LEFT AND RIGHT SIDES OF PIER APPROXIMATELY 24" LONG EACH. REPAIR PER ITEM #0601196A.   |
| 13 | SEVERE CRACKS AND SPALLING AT THE TOP RIGHT SIDE AND BOTTOM LEFT SIDE OF PIER. REPAIR PER ITEM #0601196A.   |
| 14 | RANDOM CRACKS 1/4" WIDE AT THE BOTTOM FRONT, AND RIGHT AND LEFT SIDES OF PIER. SPALLING ALONG ENTIRE INSIDE VERTICAL EDGE OF RIGHT SIDE. REPAIR PER ITEM #0601196A. |

\*NOTE: THE LENGTHS OF CRACKS GIVEN IN THE LEGEND ARE APPROXIMATE. THE CONTRACTOR MUST VERIFY THE LIMITS, NATURE AND/OR DIRECTION OF CRACKS. THE TYPES OF CONCRETE REPAIR PRESENTED IN THE LEGEND SHALL SERVE AS A GENERAL GUIDE ONLY BASED UPON PRELIMINARY INSPECTION OF THE CONDITION OF DETERIORATION. THE CONTRACTOR MUST NOTIFY THE ENGINEER FOR OTHER TYPES AND/OR LOCATIONS OF DETERIORATION THAT ARE DISCOVERED DURING CONSTRUCTION.

**REMOVAL OF DIVIDER WALL NOTES:**

1. REMOVE TIMBER WALL BY UNBOLTING INDIVIDUAL PLANKS FROM ATTACHMENT.
2. SAW-CUT BITUMINOUS CONCRETE AROUND EXISTING POSTS MARKED P1, P2 AND P3. LIMITS OF SAW-CUT SHALL BE APPROXIMATELY 24" X 24". REMOVE BITUMINOUS CONCRETE AND EXCAVATE AROUND POSTS FOR AT LEAST 12" DEEP.
3. CUT AND REMOVE EXISTING CONCRETE POSTS MARKED P1, P2 AND P3 AT APPROXIMATELY 12" BELOW THE EXISTING BITUMINOUS CONCRETE.
4. FOR THE EXISTING CONCRETE POST TO REMAIN, CUT ALL ATTACHMENT BOLTS AS CLOSE TO THE CONCRETE FACE AS POSSIBLE AFTER REMOVING TIMBER PLANKS.
5. REPAIR BITUMINOUS CONCRETE PER DETAIL "BITUMINOUS CONCRETE PAVING - WITH MEMBRANE" IN CIVIL DESIGN SHEET C-009.
6. THE WORK TO REMOVE EXISTING TIMBER WALL, BITUMINOUS CONCRETE AND CONCRETE POSTS AND THE WORK TO REPAIR BITUMINOUS CONCRETE FLOOR, INCLUDING ALL EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE PRICE FOR "HMA S0.5".

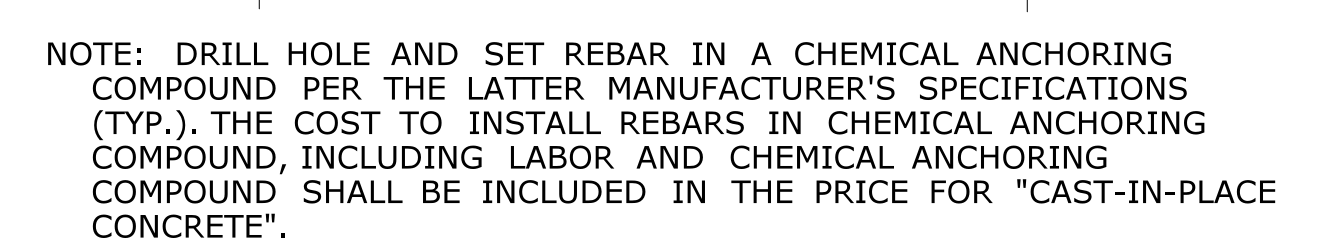
**REAR WALL CONSTRUCTION NOTES:**

1. ALL DIMENSIONS THAT PERTAIN TO THE EXISTING CONSTRUCTION SHOWN IN ALL CONTRACT DRAWINGS ARE INTENDED FOR GENERAL REFERENCE ONLY AND MUST BE VERIFIED BY THE CONTRACTOR AT THE SITE FOR ACCURACY PRIOR TO START OF ANY PHASE OF WORK.
2. THE CONFIGURATION OF ALL EXISTING CONSTRUCTION HAS BEEN DERIVED FROM OLD PLANS ON RECORD AND MUST BE VERIFIED BY THE CONTRACTOR AT THE SITE.
3. THE DIMENSIONS OF THE FOOTING SHOWN IN THE DRAWINGS SHALL BE TAKEN AS THE MINIMUM DIMENSIONS. THE FOOTING SHALL MATCH THE DEPTH AND WIDTH OF THE ADJACENT FOOTING OF THE PIERS IF THESE DIMENSIONS ARE GREATER.
4. ABBREVIATIONS:  
  
B.F. - BOTH FACES  
B.W. - BOTH WAYS  
VERT. - VERTICAL  
HOR. - HORIZONTAL  
(E) - EXISTING
5. MINIMUM CONCRETE BAR COVER:  
FOOTING - 3"  
WALL - 2"
6. ALL SIMPSON STRONG-TIE CONNECTOR HARDWARES, FRAMING BOLTS AND BOLTS INTO CONCRETE SHALL BE MADE OF STAINLESS STEEL. ALL HARDWARES SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
7. ALL TIMBER SHALL BE PRESSURE-TREATED SOUTHERN PINE #1 WITH THE FOLLOWING DESIGN PROPERTIES:

Fb = 1,450 PSI      Ft = 975 PSI      Fv = 90 PSI  
Fc = 1,250 PSI      E = 1,700,000 PSI

[illegible]





BLOCKING SHAPED FROM  
 4 X 4 AND TOE-NAILED  
 TO BASE PLATE WITH  
 16d NAILS @ 6" O.C.

2 X 4 BRACE

PLYWOOD  
 SHEATHING

SEALANT

FLASHING TO  
 TO TOP OF B

2 X 8 BASE PL  
 WITH 16d NAI  
 @ 6" O.C.

7-3  
PIER

5/8" DIA.  
TO BOLTS  
NOTES (7-3)

2'-10"

2'-10"

12'-0"

4 S-023

4 S-024

FINISHED GRADE

BITUMINOUS FLOOR FINISH INSIDE

PIER WITH #5 VERT. BARS AND #3 CLOSE TIES IN PAIRS

#5 DOWELS TO MATCH AND LAP 36" MIN. WITH VERT. BARS END BEND 6" MIN.

2'-0"

2'-0"

2'-6"

1'-0"

4'-6"

8'-0"

**SECTION AT PIER**

SCALE: 1/2" = 1'-0"

**2**

**S-024**

5 1/2"

2 - 3/4" DIAMETER BOLTS INTO POST

SIMPSON HD \*\*\*\* SEE NC

2 X 8 SILL ANCHOR

6 X 8 POST

SIMPSON A35 WITH FULL NAILING PER MANUFACTURER

5/8" DIAMETER ANCHOR BOLT WITH 24" MIN. EMBEDMENT

EXTENDING LOCKING

DATE

S

7-#5 VERT. BARS IN PIER AS SHOWN

#3 CLOSE TIES @ 6" O.C.

5/8" DIAM. BOLTS REFER TO BOLT INSTALLATION NOTES (TYP.)

#4 @ 6" O.C. HORIZONTAL BOTH FACES

#5 @ 6" O.C. VERTICAL BOTH FACES

OUTLINE OF 6 X 8 PRESSURE-TREATED TIMBER

2'-0"

6"

10-#5 VERT. BARS IN PIER AS SHOWN

#3 CLOSE TIES @ 6" O.C. IN PAIRS

1'-0"

1'-0"

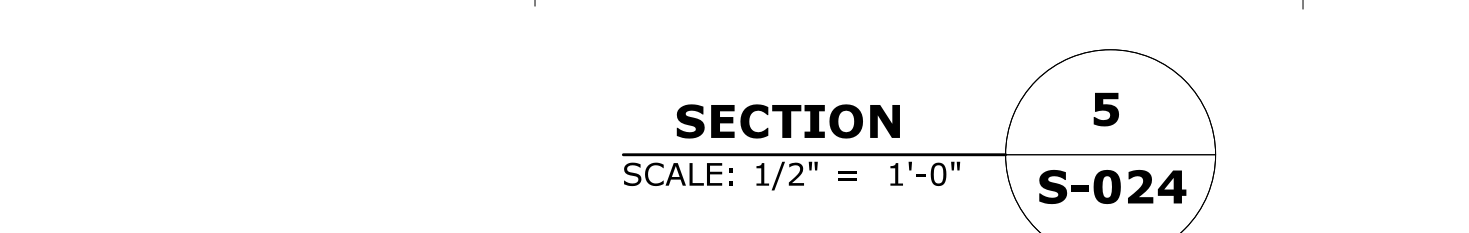
8"

1'-4"

6" (MIN.)

6" (MIN.)

**SECTION**  
SCALE: 1" = 1'-0"



(TYP.) 7 S-024

6 X 8 POST

(E) PIER

#5 DOWELS SPACED AS SHOWN  
24" DEEP INTO CONCRETE AND  
12" DEEP IN APPROVED CHEMICAL  
ANCHORING COMPOUND INTO  
EXISTING CONCRETE (TYP.)  
ALL CENTERED IN WALL U.N.O.  
\*\*\* SEE NOTE BELOW

1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
1'-0"  
6"

R.C. WALL (HATCHED)

#5 DOWELS @ 12" O.C.  
ALONG WIDTH OF FOOTING.  
OUTER DOWELS AT 6" FROM  
FOOTING ENDS  
(8 PLACES TOTAL)

8" 1'-4" 8"

(E) FOOTING

1'-0"  
1'-0"

R.C. FOOTING (HATCHED)

### BOLT INSTALLATION NOTES:

1. BOLTS ARE 5/8" DIAMETER STAINLESS STEEL.  
(FY=36 KSI OR BETTER) NUTS AND WASHERS ARE STAINLESS STEEL.
2. COUNTER-SUNK BOLTS AT THE FRONT FACE OF TIMBER. BOLTS ARE TO BE CENTERED ON THE FACE OF TIMBER.
3. DRILL HOLE AND SET BOLT IN A CHEMICAL ANCHORING COMPOUND PER THE LATTER MANUFACTURER'S SPECIFICATIONS.
4. MINIMUM EMBEDMENT OF BOLTS IS 6 INCHES.
5. THE COST TO INSTALL THE STAINLESS STEEL BOLTS, INCLUDING LABOR, CHEMICAL ANCHORING COMPOUND AND MATERIALS SHALL BE INCLUDED IN THE PRICE FOR "CAST-IN-PLACE CONCRETE".

[illegible]



DELINEATE AND REMOVE AREAS OF UNSOUND CONCRETE

IS THE REPAIR OVERHEAD?

NO

IS AT LEAST HALF THE  
SURFACE AREA OF  
REINFORCING EXPOSED?

NO

YES

IS PATCH AREA  
"GREATER THAN" 4 S.F.?

NO

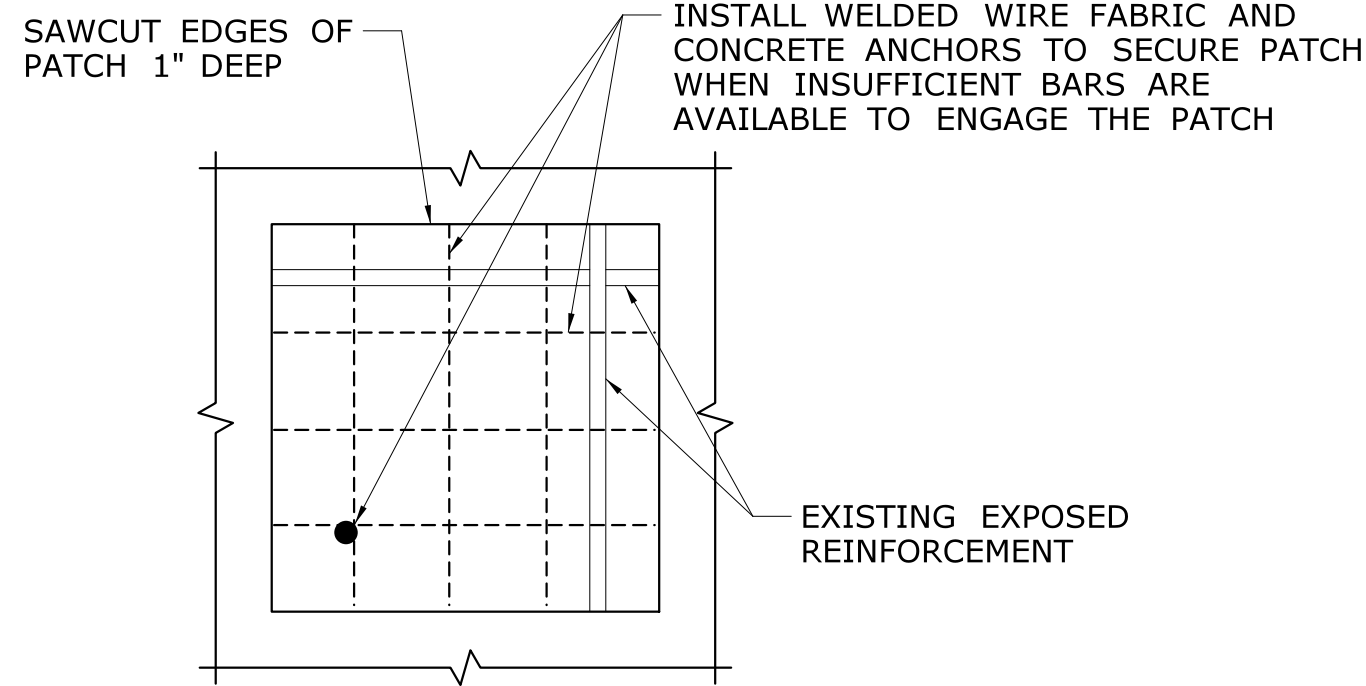
COMBINED AREAS OF  
SMALLER PATCHES  
SIGNIFICANT?

YES

CONSIDER VARIABLE DEPTH PATCH-TYPE REPAIR  
(REFER TO VARIABLE DEPTH PATCH TYPE REPAIR  
THIS SHEET)

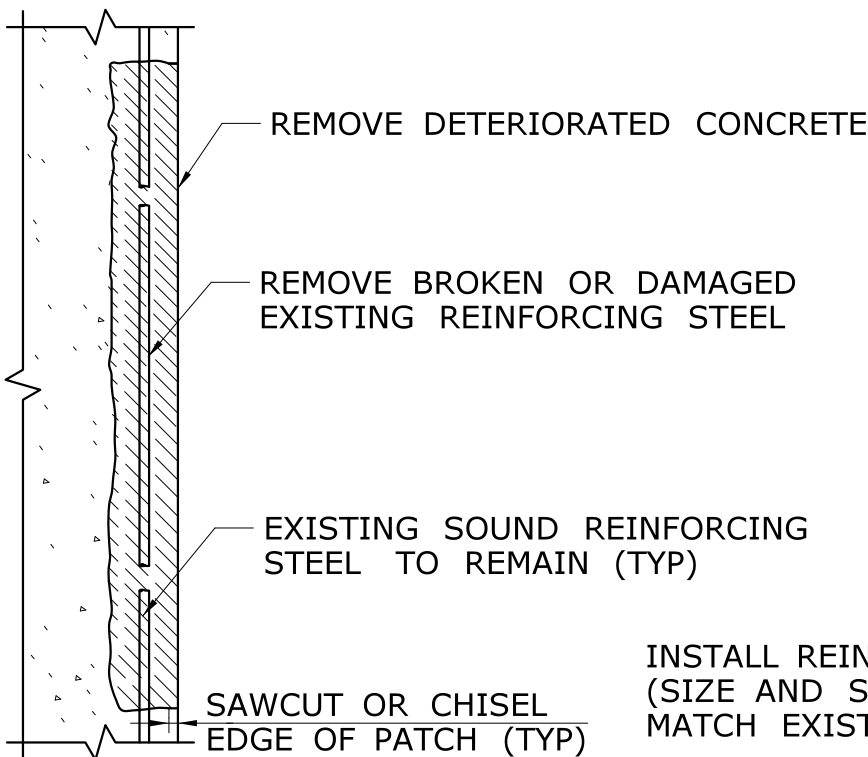
CONSIDER CLASS "S"-TYPE REPAIR  
(SEE DETAILS THIS SHEET)

FLOWCHART TO DETERMINE TYPE OF CONCRETE REPAIR



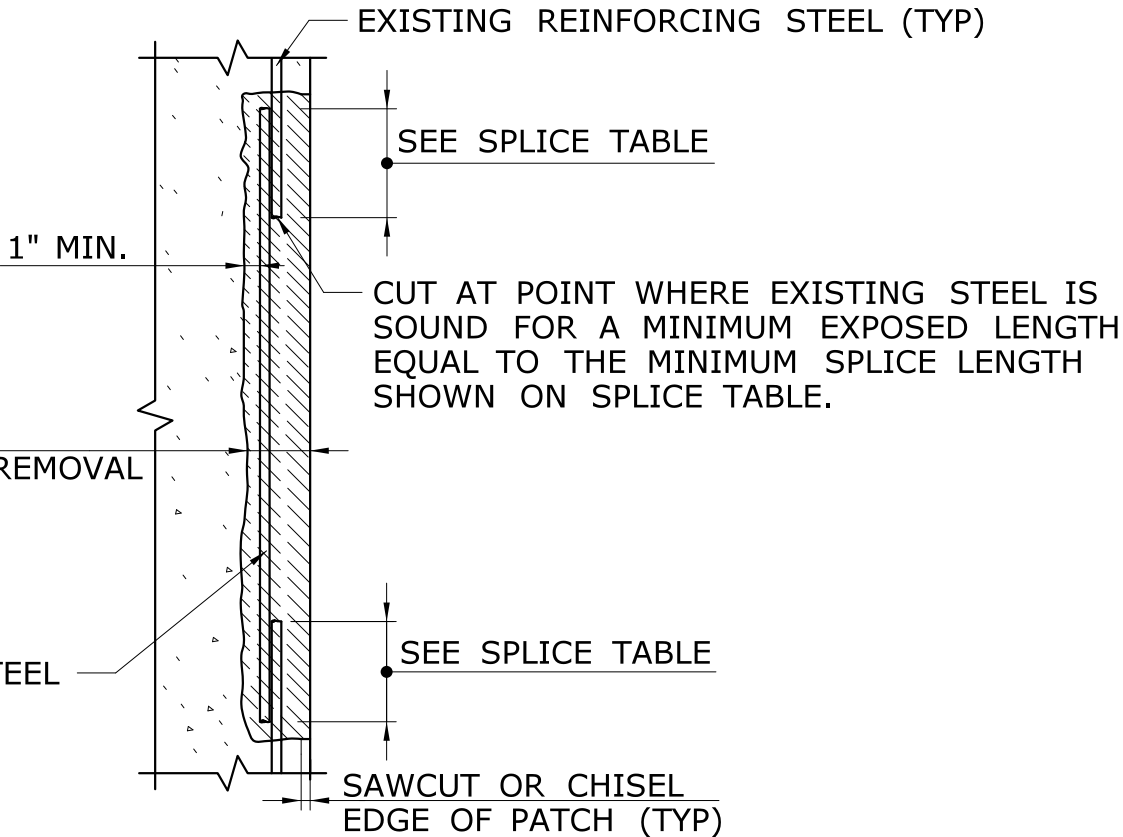
SECURING PATCH  
WITH WELDED WIRE FABRIC

NOT TO SCALE



TYPICAL SECTION  
DAMAGED REINFORCING

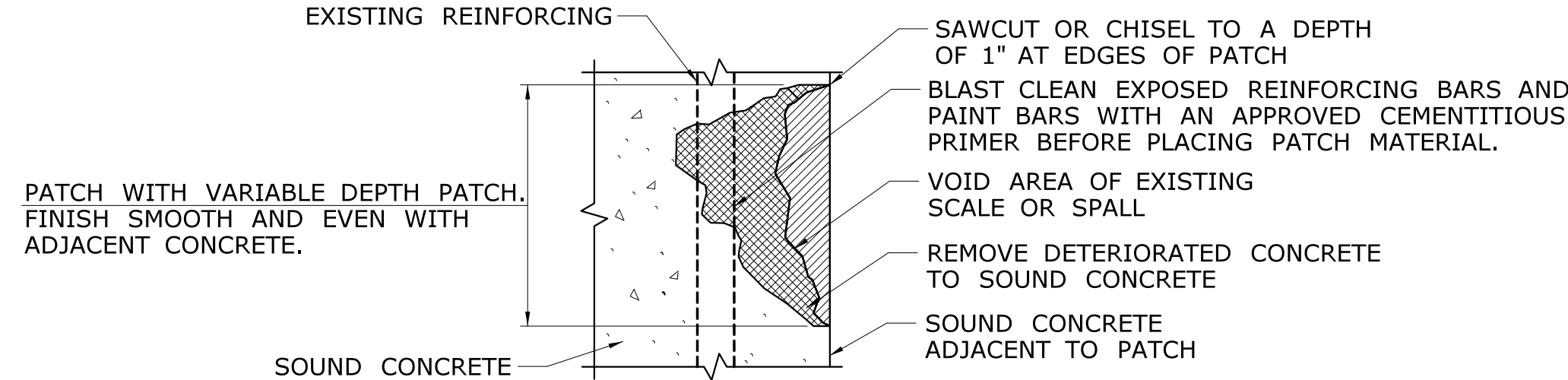
INSTALL REINFORCING STEEL  
(SIZE AND SPACING TO  
MATCH EXISTING STEEL)



TYPICAL SPLICE DETAIL

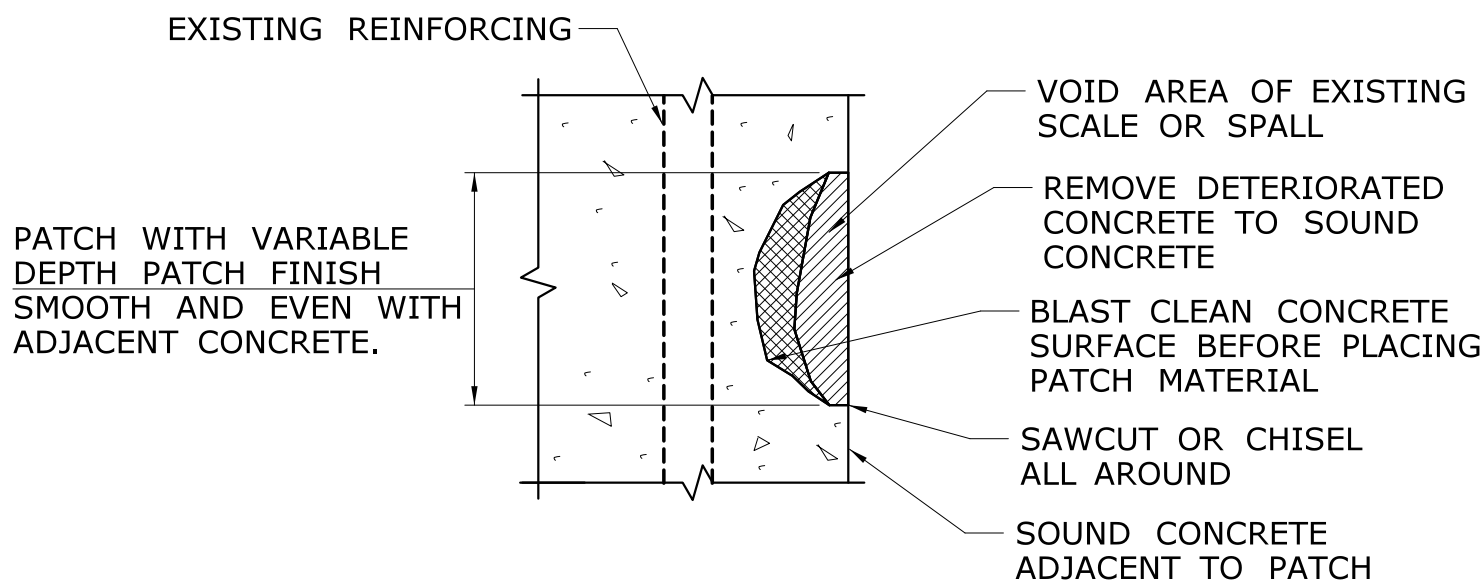
REINFORCING REPAIR DETAIL

NOT TO SCALE



VARIABLE DEPTH PATCH TYPE REPAIR  
(REINFORCING PARTIALLY EXPOSED)

NOT TO SCALE



VARIABLE DEPTH PATCH TYPE REPAIR  
(NO REINFORCING EXPOSED)

NOT TO SCALE

BLAST CLEAN EXPOSED  
REINFORCING BARS

1" (MIN)

SAWCUT OR CHISEL ALL AROUND

FASTEN 4 X 4 - W2.9 X W2.9 WELDED WIRE  
FABRIC TO EXISTING REINFORCING BARS OR  
TO POWDER ACTUATED ANCHORS ANCHORED  
TO SOUND CONCRETE

VOID AREA OF EXISTING  
SCALE OR SPALL

REMOVE DETERIORATED CONCRETE  
TO SOUND CONCRETE

SOUND CONCRETE  
ADJACENT TO PATCH

CLASS "S" CONCRETE

NOT TO SCALE

GENERAL

THE ENGINEER WILL DETERMINE THE LOCATIONS OF UNSOUND OR DETERIORATED CONCRETE TO BE REPAIRED. THE METHOD USED TO DELINEATE AREAS OF CONCRETE TO BE REPAIRED SHALL NOT PERMANENTLY MARK THE CONCRETE, LEAVE ANY RESIDUE AFTER REMOVAL, OR REQUIRE HARSH CHEMICALS TO REMOVE.

THE CONTRACTOR SHALL REMOVE THE DETERIORATED CONCRETE IN ACCORDANCE WITH THE GUIDELINES SET IN THESE NOTES AND IN THE SPECIAL PROVISIONS AND THE ENGINEER WILL DETERMINE THE TYPE OF REPAIR REQUIRED FOR EACH AREA USING THE FLOWCHART ON THIS SHEET AS A GUIDELINE FOR REPAIR TYPES.

CLASS "S" CONCRETE

THIS TYPE OF REPAIR SHALL BE USED WHERE THE REINFORCING BARS ARE SUFFICIENTLY EXPOSED TO ENGAGE AND ANCHOR THE PATCHING MATERIAL. CLASS "S" CONCRETE MAY BE USED FOR SMALLER AREAS LESS THAN FOUR SQUARE FEET WHERE THERE IS A SUFFICIENT TOTAL AREA TO JUSTIFY THE USE OF THIS MATERIAL AND WHERE THE PATCH CAN BE SECURELY ANCHORED BY THE REINFORCING.

BEFORE APPLYING THE PATCHING MATERIAL, THE REINFORCING BARS SHALL BE BLAST-CLEANED.

REINFORCING BAR REPAIRS

REINFORCING WHICH IS DETERMINED BY THE ENGINEER TO BE IN NEED OF REPLACEMENT, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE PATCH SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON THIS SHEET.

RESTRICTIONS

THE REMOVAL OF DETERIORATED CONCRETE SHALL PROCEED AS DIRECTED BY THE ENGINEER. IF THE REMOVAL OF DETERIORATED CONCRETE BECOMES EXCESSIVE, THE REMOVAL WORK SHALL BE STOPPED AT THAT LOCATION AND THE ENGINEER NOTIFIED IMMEDIATELY.

MAXIMUM HAMMER SIZE USED TO REMOVE DETERIORATED CONCRETE SHALL BE 15 POUNDS.

IF REMOVAL EXTENDS MORE THAN 1 1/2" BEHIND THE MAIN REINFORCING BARS, THE REMOVAL WORK SHALL BE STOPPED AND THE ENGINEER NOTIFIED IMMEDIATELY.

IF THE AREA OR DEPTH OF REMOVAL IS DEEMED TO BE EXCESSIVE, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED BEFORE CONTINUING REMOVAL WORK.

PAY ITEM NOTES

1. THE 1" DEEP SAW-CUT SHALL BE INCLUDED IN THE CONTRACT BID PRICE OF THE APPLICABLE REPAIR PAY ITEM.
2. REINFORCING BARS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "CAST-IN-PLACE CONCRETE".

TABLE OF SPLICE LENGTHS

	BAR SIZE	MIN. SPLICE LENGTH
REINFORCEMENT SPACING @ ≥ 6" O.C. **	#4	1'-4"
	#5	1'-4"
	#6	1'-9"
	#7	2'-4"
	#8	3'-0"

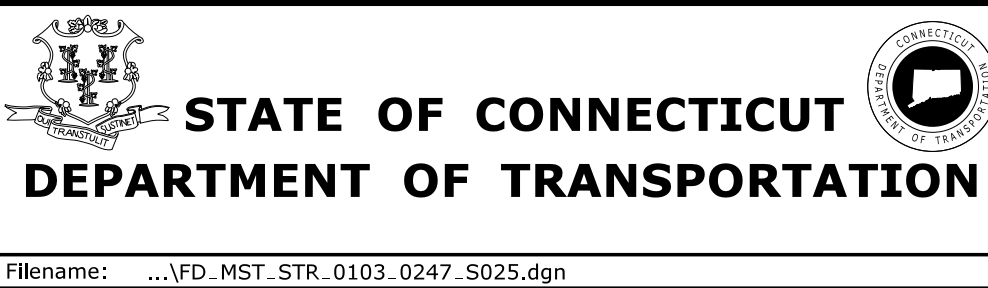
\*\* FOR BARS SPACED "LESS THAN" 6" O.C.  
MULTIPLY TABLE VALUES BY 1.25

-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/15/2015

DESIGNER/DRAFTER:  
**RPL/DCS**  
CHECKED BY:  
**RPL**  
SCALE AS NOTED



SIGNATURE/  
BLOCK:  
**OFFICE OF ENGINEERING**  
APPROVED BY: DATE:

PROJECT TITLE:

**OCCUM  
MAINTENANCE  
FACILITY**

TOWN:

**OCCUM**

DRAWING TITLE:

**SALT SHED REPAIR - 3**

PROJECT NO.

**103-247**

DRAWING NO.

**S-025**

SHEET NO.

**06.25**